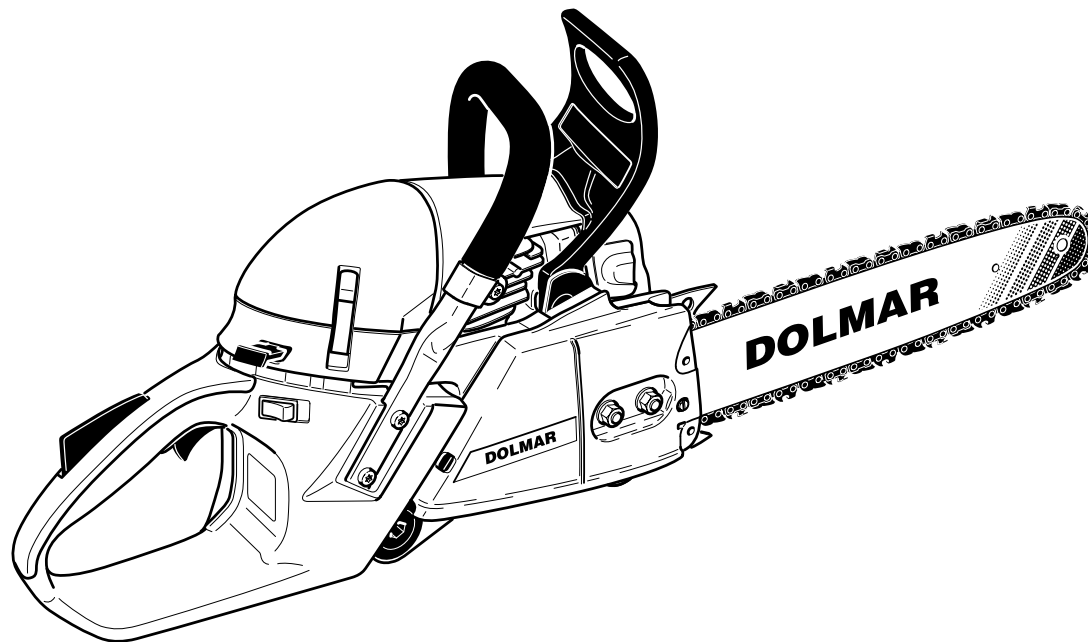


Repair Manual



PS-6400, PS-6400 H
PS-7300, PS-7300 H
PS-7900, PS-7900 H





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Technical data

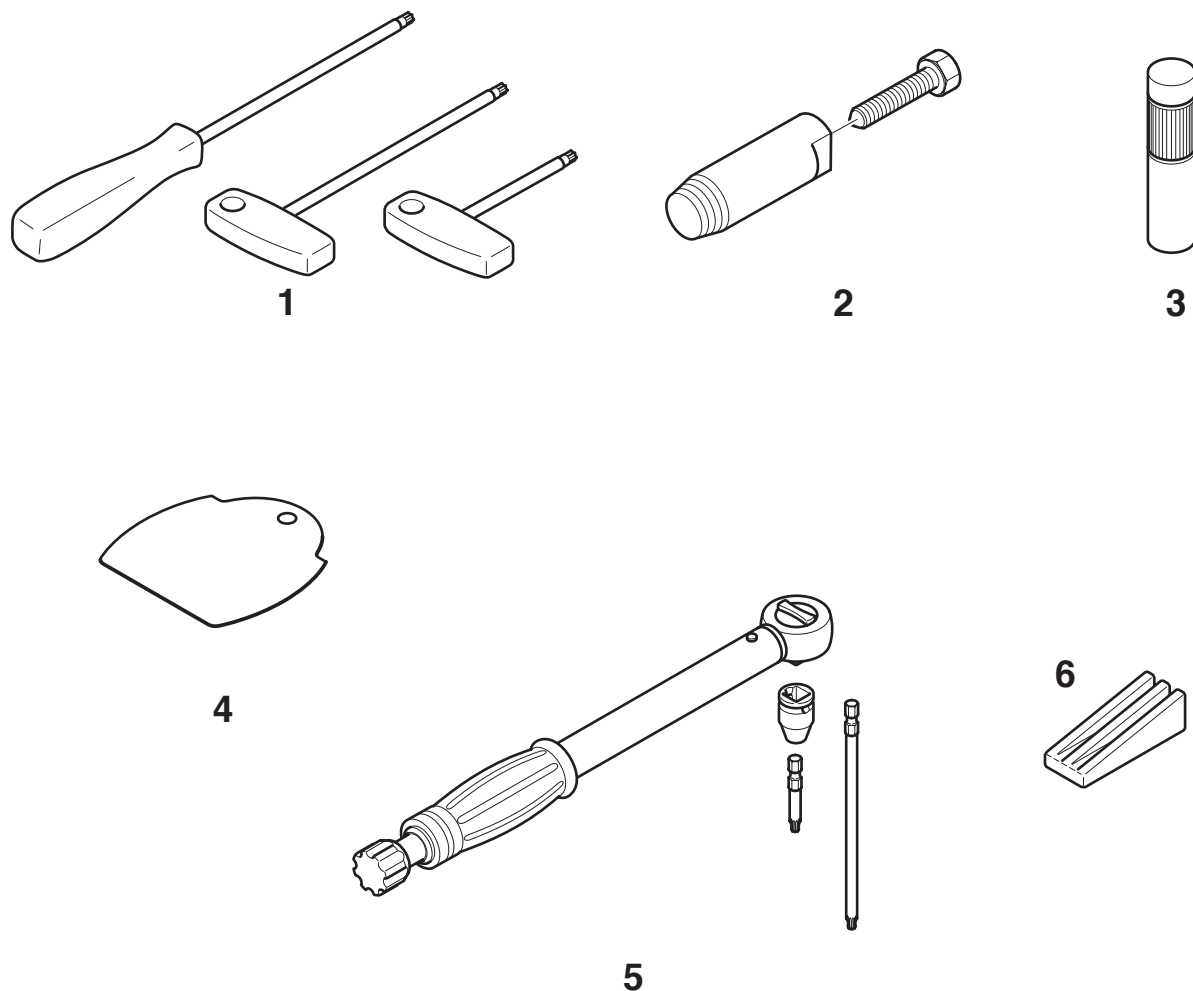
		PS-6400	PS-7300	PS-7900
Stroke volume	cm ³	64,2	72.6	78.5
Bore	mm	47	50	52
Stroke	mm	37	37	37
Max. power at speed ³⁾	kW / 1/min	3.5 / 9,000	4.2 / 9,500	4.6 / 9,500
Max. torque at speed ³⁾	Nm / 1/min	4.2 / 6,500	4.8 / 7,000	5.2 / 7,000
Idling speed / max. engine speed with bar and chain	1/min	2,500 / 13,500	2,500 / 13,500	2,500 / 13,500
Clutch engagement speed	1/min	3,200	3,200	3,200
Sound pressure level at the workplace L _{PA av} per ISO/CD 22868 ¹⁾	dB (A)	104.3	104.3	104.3
Sound power level L _{WA av} per ISO/CD 22868 ¹⁾	dB (A)	113.3	113.3	113.3
Vibration acceleration a _{h,w av} per ISO 7505 ¹⁾				
- Tubular handle	m/s ²	6.9	6.9	6.9
- Rear handle	m/s ²	7.7	7.7	7.7
Carburetor (diaphragm carburetor)	Type	ZAMA		
Ignition system	Type	electronic		
Spark plug	Type	NGK BPMR 7A		
Electrode gap	mm	0.5		
or spark plug	Type	BOSCH WSR 6F		
Fuel consumption at max. load per ISO 7293 ³⁾	kg/h	1.72	2.33	2.3
Specific consumption at max. load per ISO 7293 ³⁾	g/kWh	500	510	505
Fuel tank capacity	l	0.75		
Chain oil tank capacity	l	0.42		
Mixture ratio (fuel/two-stroke oil)				
- when using DOLMAR oil		50 : 1		
- when using other oils		40 : 1		
Chain brake		engages manually or in case of kickback		
Chain speed ²⁾	m/s	19.74	20.83	20.83
Sprocket pitch	inch	3/8		
Number of teeth	Z	7		
Chain type see the Extract from the spare-parts list		099		
Pitch / gauge	inch	3/8 / .058		
Guide bar, length of a cut	cm	38 / 45 / 50 / 60 / 70		
Guide-bar type see the Extract from the spare-parts list				
Weight (fuel tank empty, without chain and guide bar)	kg	6.3	6.3	6.3

¹⁾ Figures derived in equal part from idling, full-load and racing speed.

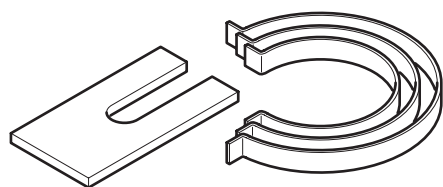
²⁾ At max. power

³⁾ For models without starting valve

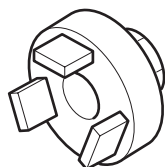
Malfunction	System	Observation	Cause
Chain does not run	Chain brake	Engine runs	Chain brake actuated.
Engine does not start or only with difficulty	Ignition system	Ignition spark No ignition spark	Malfunction in fuel supply system, compression system, mechanical malfunction. Switch on STOP, fault or short-circuit in the wiring, plug cap or spark plug defective. Choke in wrong position, carburetor defective, fuel filter dirty, fuel line bent or interrupted, torn, perforated Cylinder base packing ring defective, radial shaft packings defective, cylinder or piston rings defective Spark plug does not seal. Spring in starter broken, broken parts inside the engine.
	Fuel supply	Fuel tank is filled	
	Compression system	Inside	
	Mechanical malfunction	Outside Starter does not engage	
Warm engine doesn't start	Carburetor	Fuel tank is filled Ignition spark	Wrong carburetor adjustment, flooded by usage of the choke
Engine starts, but dies immediately	Fuel supply	Fuel tank is filled	Wrong idling adjustment, fuel filter or carburetor dirty. Tank venting defective, fuel line interrupted, cable defective, STOP switch defective. Decompression valve dirty
Insufficient power	Several systems may be involved simultaneously	Engine is idling	Air filter dirty, wrong carburetor adjustment, muffler clogged, exhaust channel in cylinder clogged, spark arrester screen clogged, worn piston
No chain lubrication	Oil tank/pump	No oil on the chain	Oil tank empty, oil guide groove dirty, oil-pump adjusting screw incorrectly adjusted, oil pump drive defective



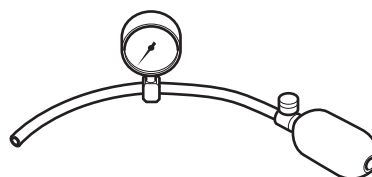
- | | |
|---|---------------|
| 1 Torx screwdriver | |
| Grip | (944.500.860) |
| T-grip, 200 mm | (944.500.862) |
| T-grip, 100 mm | (944.500.861) |
| 2 Radial ring puller | |
| 15 mm radial ring puller | (944.xxx.xxx) |
| 17 mm radial ring puller | (944.xxx.xxx) |
| Spindle | (950.203.020) |
| 3 Mandrel | |
| Disassembly mandrel for knocking the flywheel loose without damage to the crankshaft thread | (944.500.880) |
| 4 Setting gauge | |
| Gauge for measuring the gap between flywheel and ignition armature | (944.500.891) |
| 5 Torque wrench | |
| 3/8" Drive socket | (944.500.864) |
| Bit, 152 mm | (944.500.865) |
| Bit, 49 mm | (944.500.866) |
| Torque wrench 3/8" Drive | (950.230.000) |
| 6 Piston stop wedge | |
| Wedge for blocking the motor through the exhaust port | (944.602.000) |



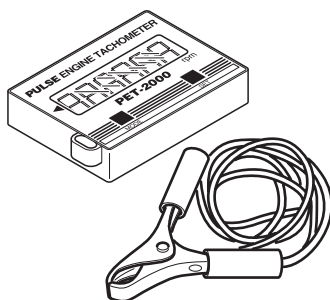
7



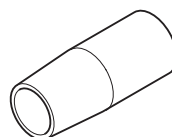
8



9



10



11

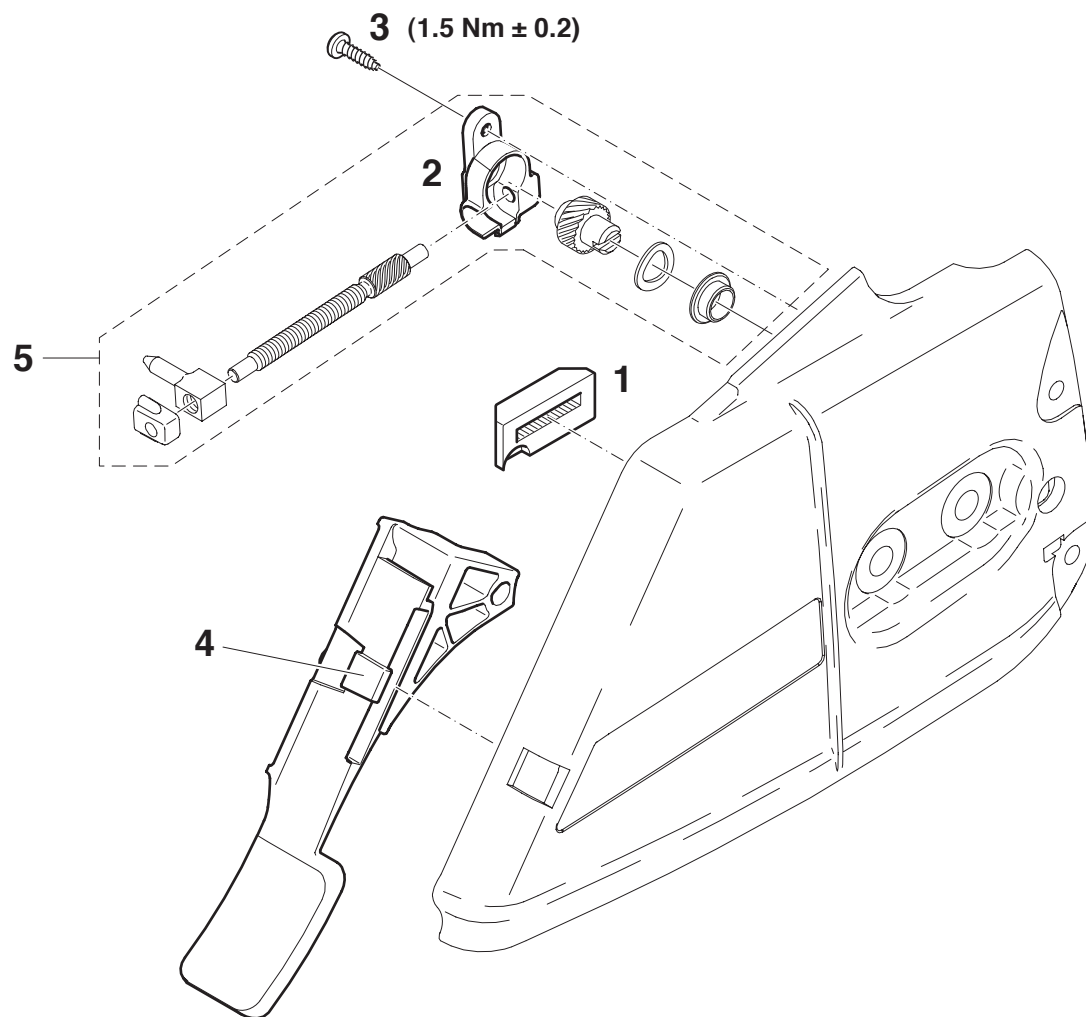
- 7 Piston ring tensioner**
 Piston ring band and assembly tool for cylinders (944.600.001)

- 8 Assembly and disassembly wrench**
 Wrench for disassembling and assembling the centrifugal clutch (944.500.570)

- 9 Pressure gauge**
 Pressure gauge for checking the carburetor fuel valve (956.004.000)

- 10 Tachometer**
 Electronic tachometer for measuring the engine speed of 2- and 4-stroke engines (950.233.210)

- 11 Installation sleeve**
 for radial rings (944.603.410)



How the chain tensioner works

The force applied to the adjusting screw is transferred by the angle worm drive to the tensioning pin.

Replace the chain guide 1 if it is worn.

Mount the housing 2 in the sprocket guard with slotted screw 3 (3.5 x 9.5).

NOTE: The worm drive is available only as a set 5. Grease the spindle and worm with multipurpose grease (944.360.000).

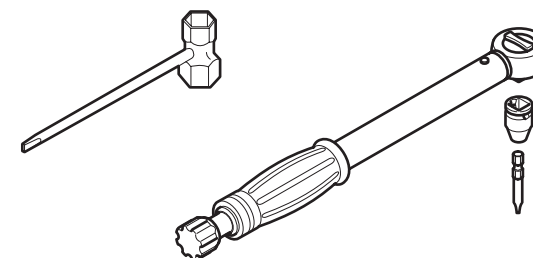
Chip guide

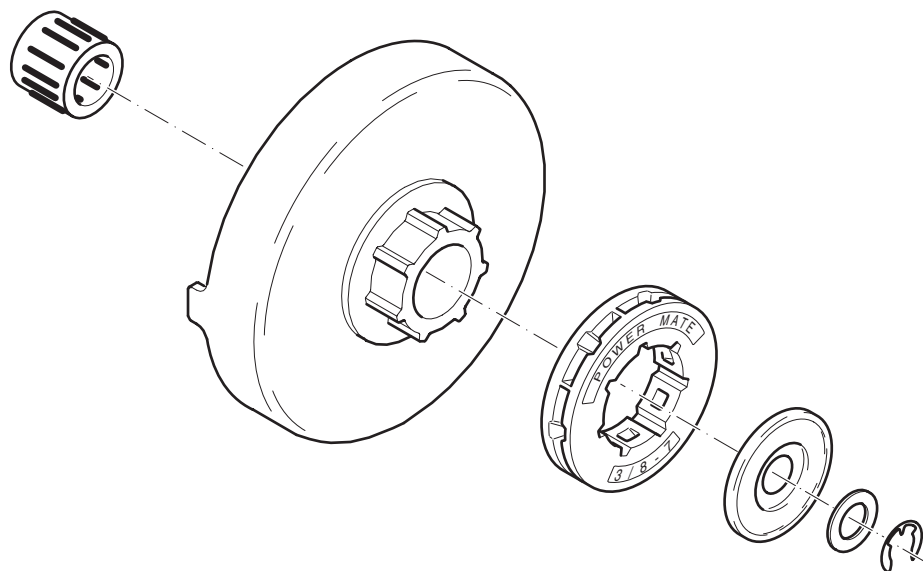
The chip guide ensures that chips are deflected away from the cut.

This is especially important for rip cuts, to prevent clogging.

To replace it, push the catch 4 inwards from the outside of the chain guard.

Tool





Sprocket, clutch drum and needle bearing

Inspect the sprocket for damage and wear.

Important customer information:

Before installing a **new** chain the sprocket must be inspected.

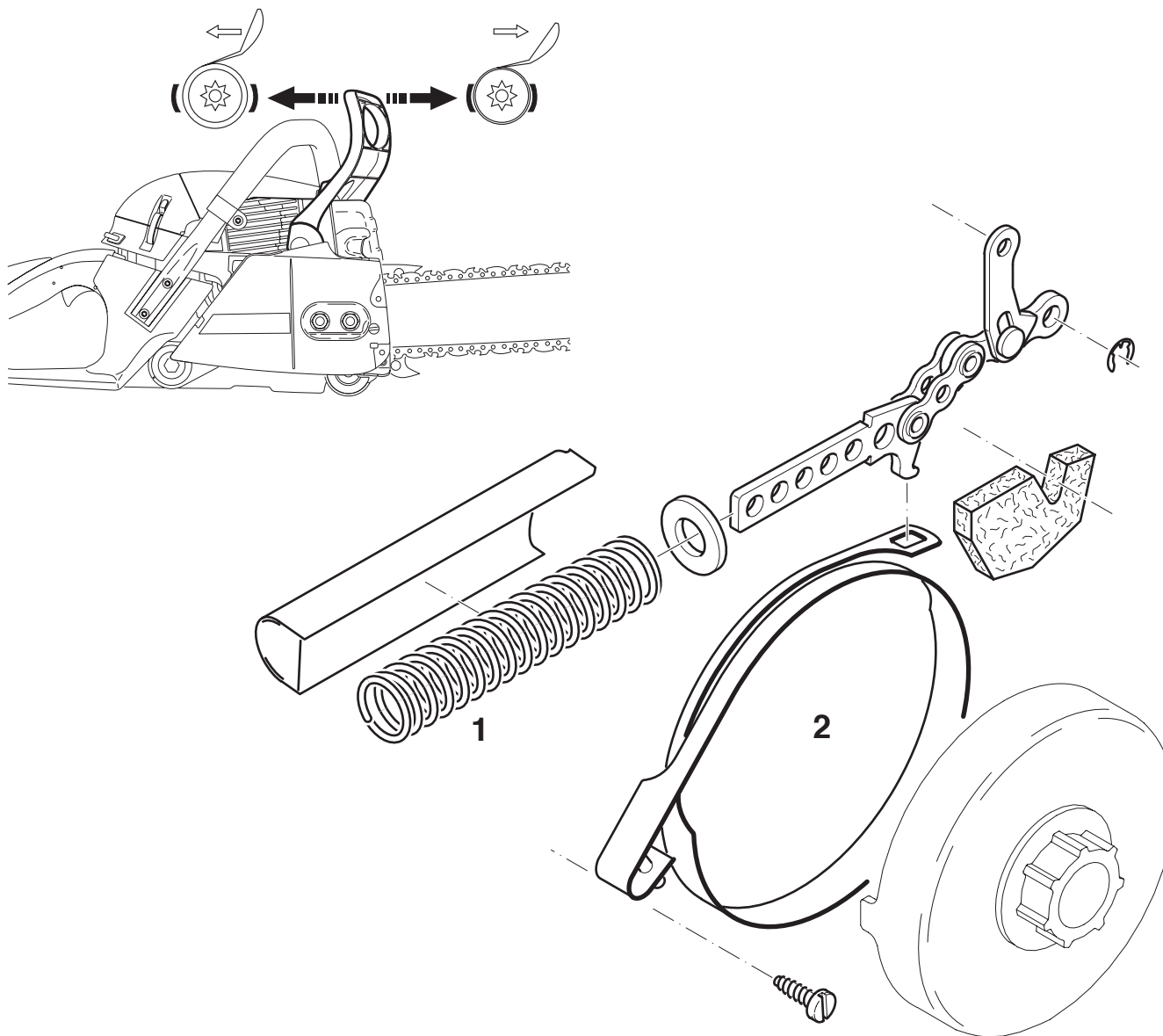
Worn sprockets will damage a new saw chain and must always be replaced.

Check the clutch drum bearing for damage and wear. Assemble with multipurpose high-performance grease (944.360.000).

Check the clutch drum for damage and wear, and replace if worn.

Note:

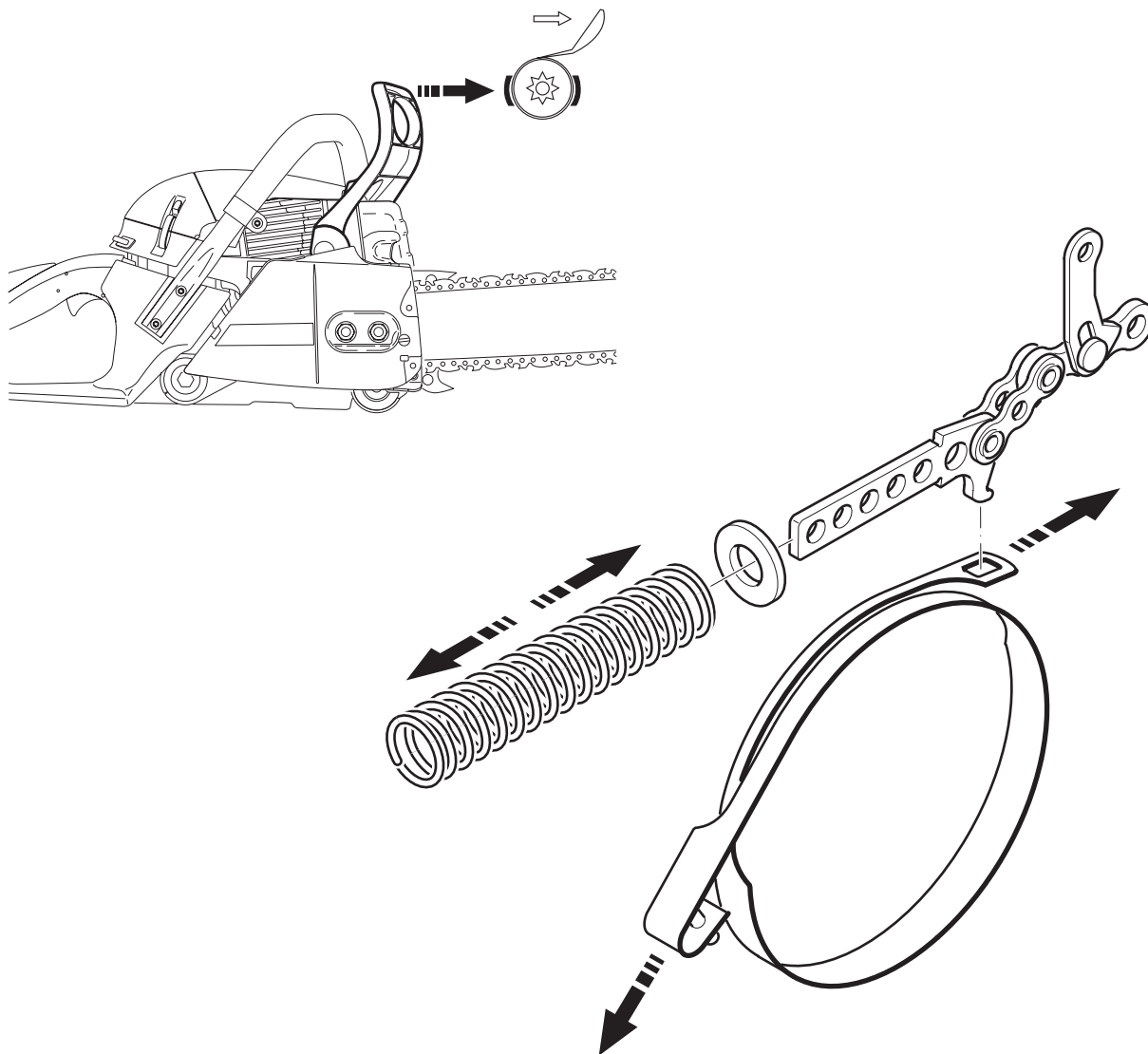
Always use a new circlip (927.408.000)!



Chain brake

The chain brake stops the chain within 0.1 seconds in the event of kickback.

The brake band **2** encircles the clutch drum 380°. A spring **1** pulls the brake band around the clutch drum.



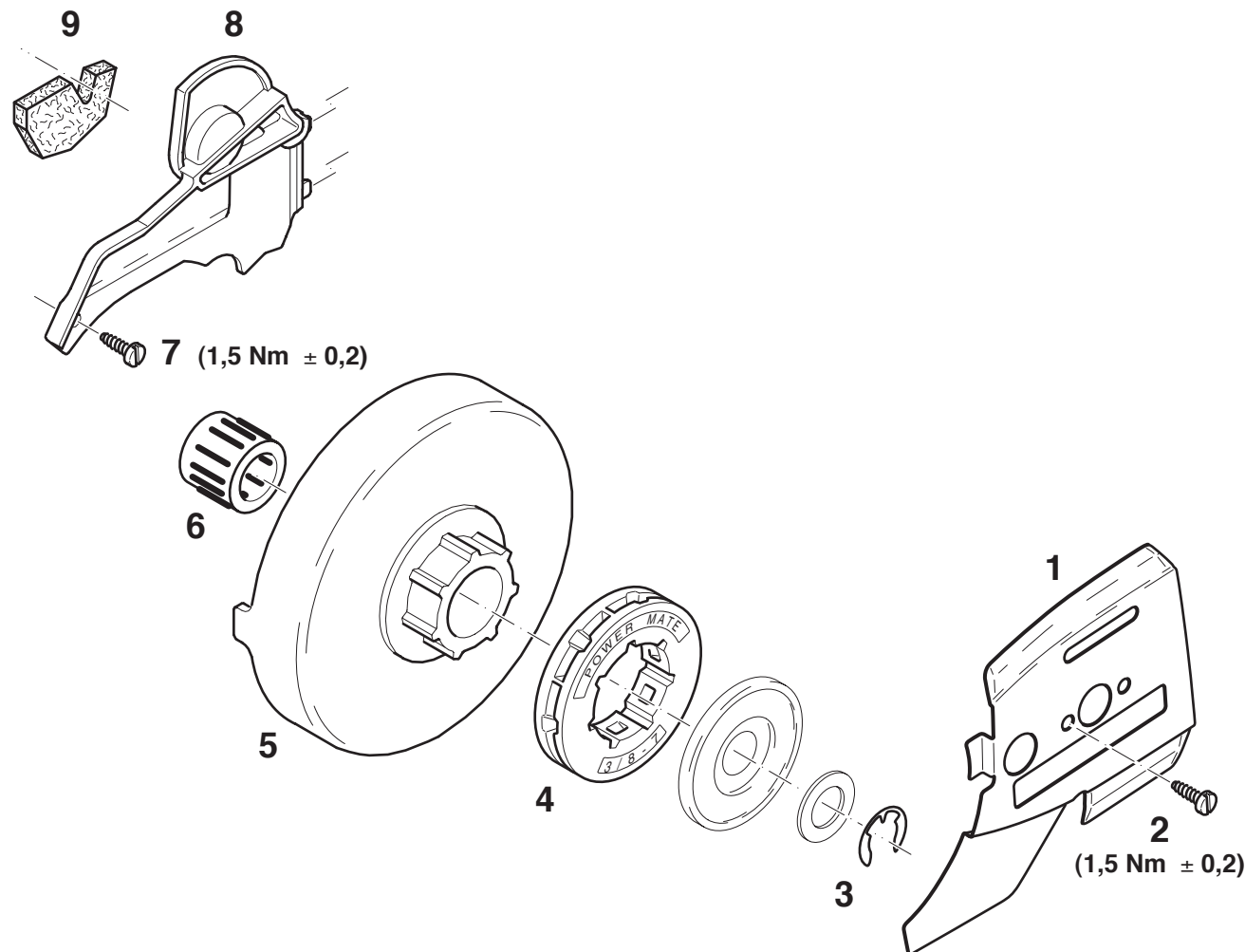
Engage the chain brake

Push the hand guard forward so that the linkage release the spring tension.

Safety note:

Strong spring!

Never work on the chain brake when the spring is under tension!



Removing the sprocket and clutch drum, exposing the chain brake

Remove the sprocket guard, saw chain and guide bar.

Remove the chain guide plate 1, assembly with slotted screw 2 (3.5 x 9.5 mm).

Remove the washer 3 and pull off the sprocket 4 with discs.

Pull the hand guard slightly towards the tubular handle (**do not let it disengage!**) and hold it firmly, to cancel the brake force on the clutch drum.

Important: If the hand guard disengages, push it forward again.

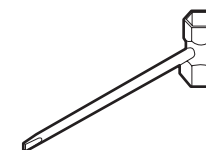
Never actuate the hand guard without the clutch drum! This could break the linkage or the housing.

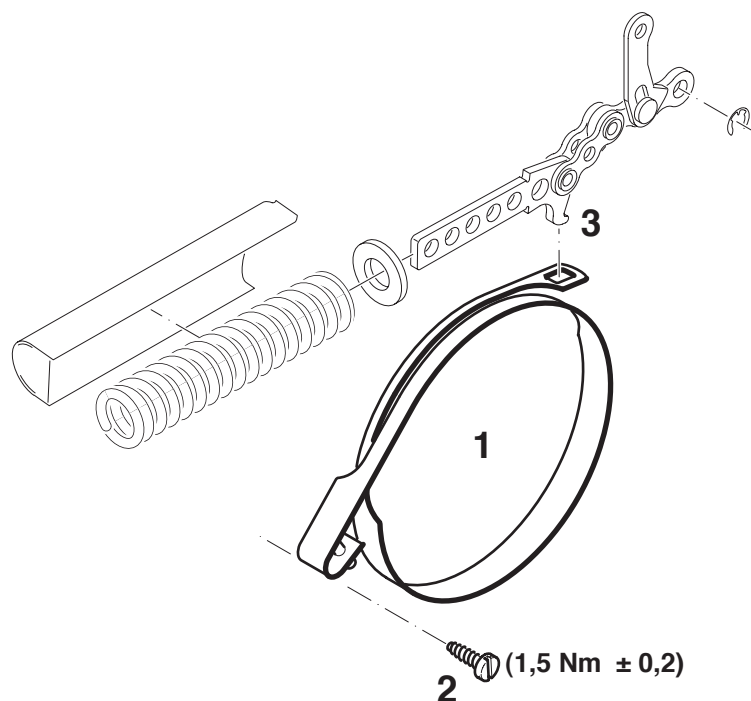
Remove the clutch drum 5 (note needle bearing 6) and release the hand guard again slowly.

Remove the covering plate 8, assembly with slot head screw 7 (3.5 x 9.5 mm).

Remove foam sponge 9.

Tool





Replacing the brake band

Loosen screw 2.

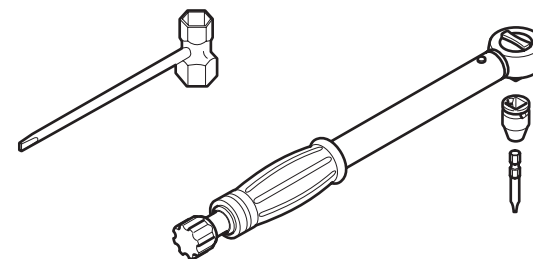
Lever brake band 1 out of the housing and turn it 90° to disengage it from the lug 3.

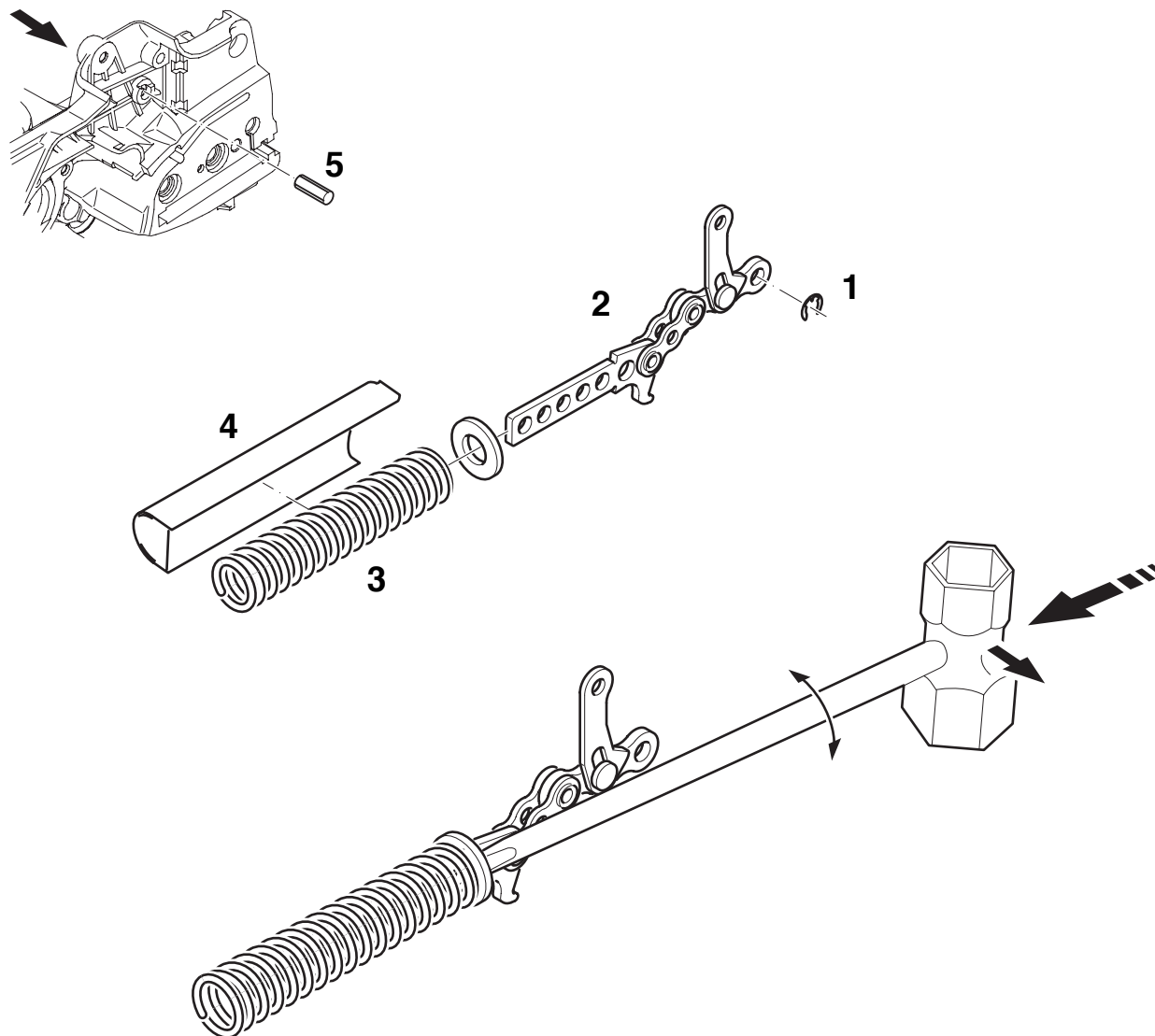
Check the inside of the brake band for signs of wear.

The chain brake is an important safety component. Always check it for wear.

A worn brake band must be replaced (927.408.000)!

Tool





Removing the brake spring

Disassembly

Secure the engine unit against slipping.

Disassemble the muffler.

Remove circlip 1.

Using the universal wrench as shown in the picture and push against the spring pressure, while twisting it back and forth slightly and pulling up. This will lever the linkage from the pin.

Pull the disengagement mechanism 2 out of the spring 3.

Pull the spring 3 out of the spring housing 4 and pull the spring housing out of the housing.

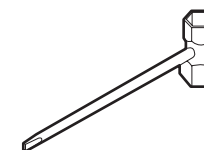
Assembly

Before assembly, drive the slotted pin 5 out of the housing with a mandrel (dia. 4 mm) in the direction of the muffler.

Install the disengagement mechanism and insert the grooved pin.

Important: The circlip 1 must be inserted in the bottom groove.

Tool



Removing the hand guard

Engage the chain brake.

Unscrew Torx screw **1** (M5 x 20).

Remove bushing **2**.

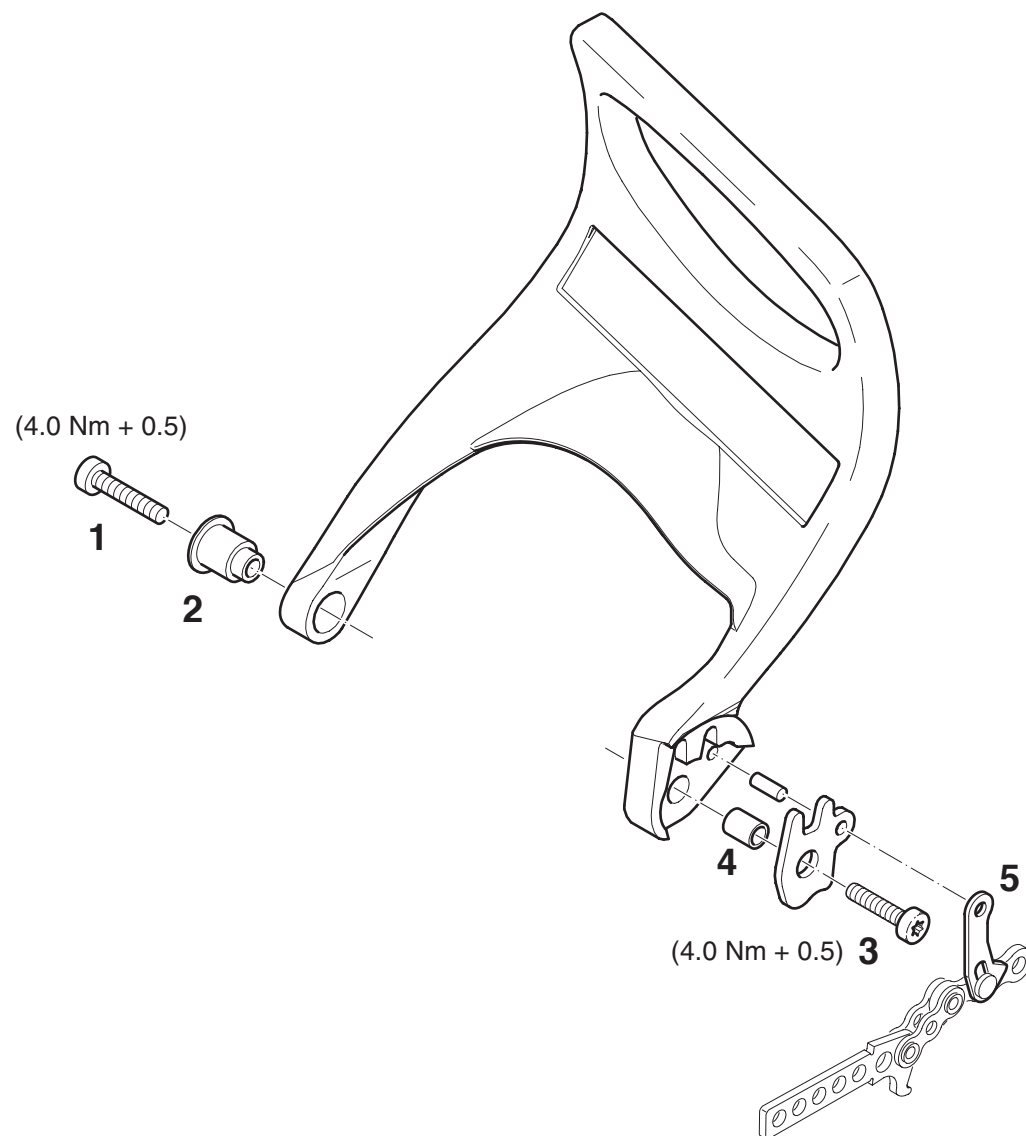
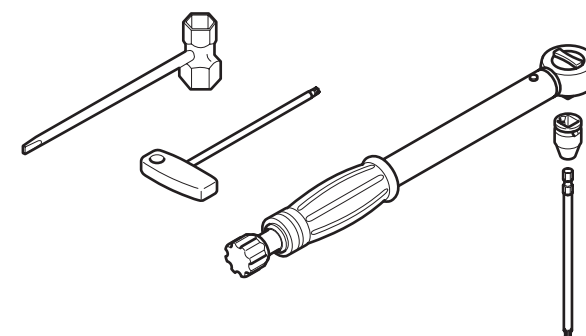
Unscrew Torx screw **3** (908.005.206, M5 x 25, microencapsulated). When reassembling, always replace screw **3** or secure it with "Loctite 243" (980.009.000).

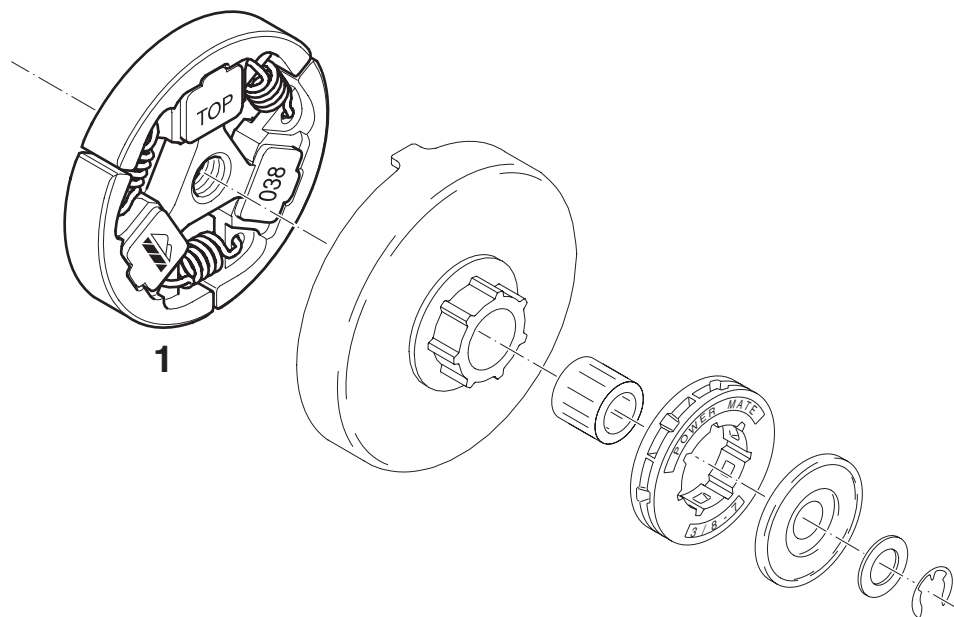
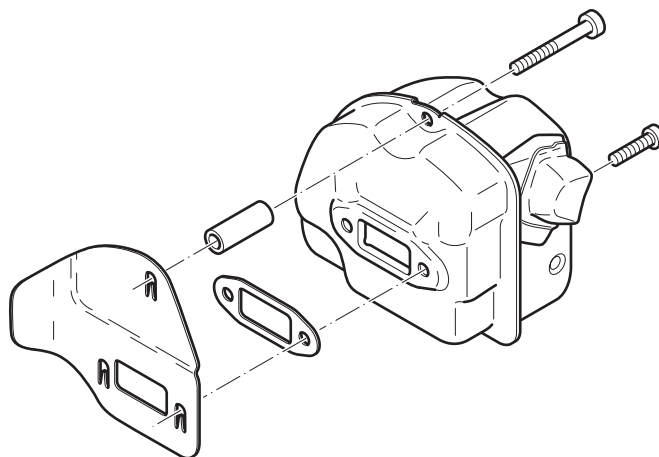
Remove bushing **4**.

Push linkage arm **5** up slightly and disengage (it may be necessary to hold the pin against it).

Remove hand guard.

Tool





Clutch

The clutch has 3 centrifugal weights. At speeds over 3200 rpm it engages the clutch drum.

The weights are held on the clutch hub with 3 tension springs.

The maximum idle is 2600 rpm.

If the clutch drum engages (i.e. the chain turns) under 3200 rpm, clean and inspect the clutch. It may be necessary to replace the springs.

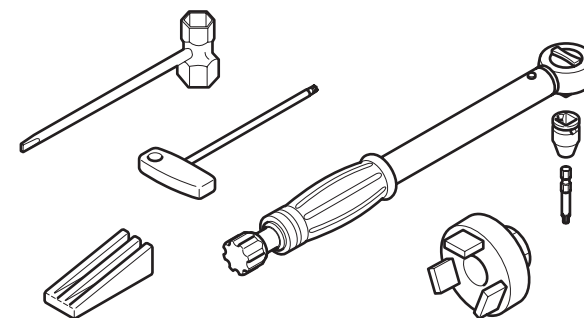
Remove the muffler.

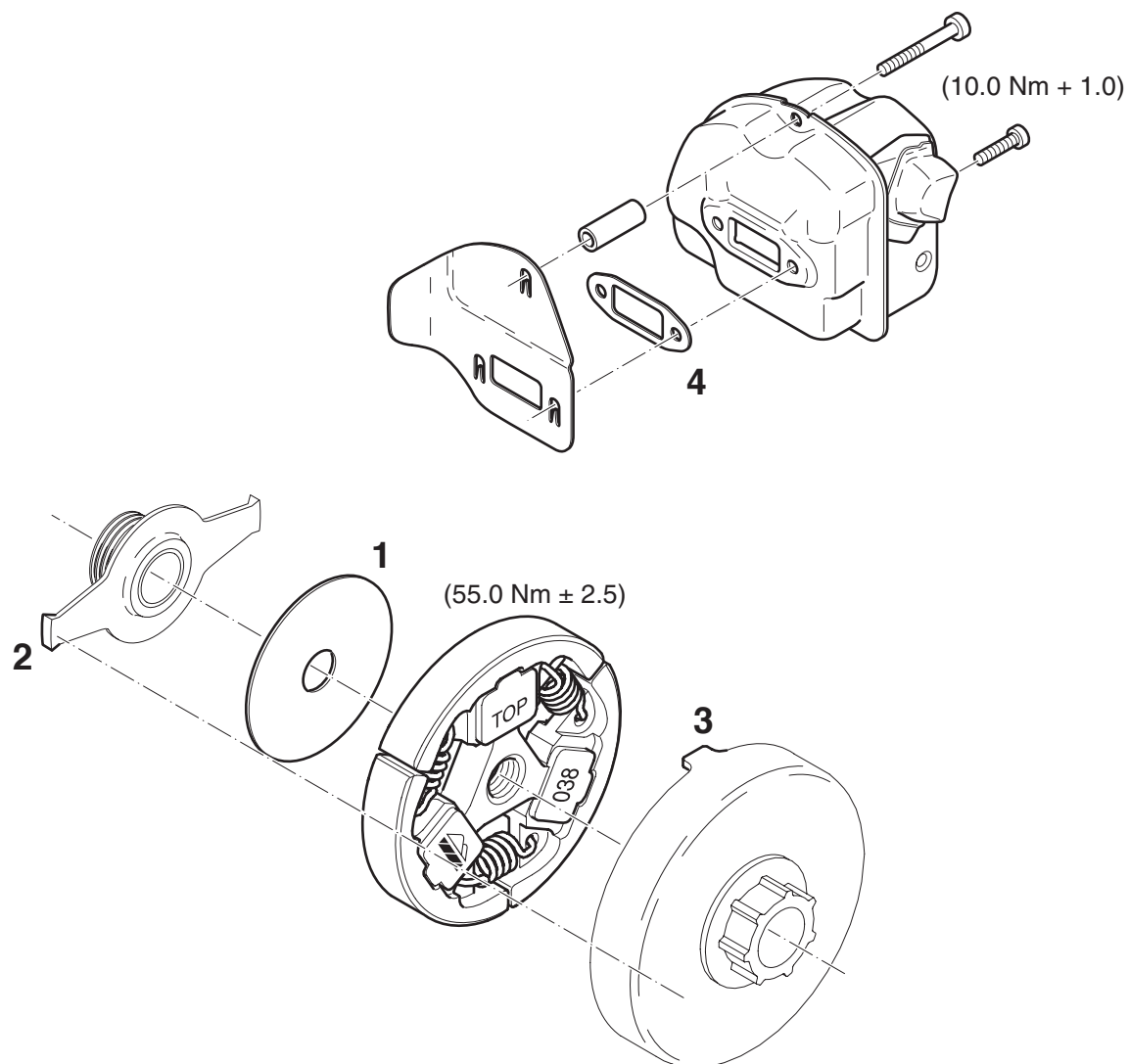
Block the engine with piston stop wedge (944.602.000).

Remove the clutch drum (see page 11).

Loosen the clutch 1 with assembly tool (944.500.570) by turning clockwise.

Tool





Replacing the springs

If the chain moves at engine speeds below 3200 rpm, replace the springs (024.184.021).

Remove and replace the springs with needle-nose pliers.

Insert the centrifugal weights with the “TOP” lettering towards the outside.

Careful! The springs can fly out and cause injury.

Assembly note: Disassemble the starter assy to prevent a damage of the starter ratchets.

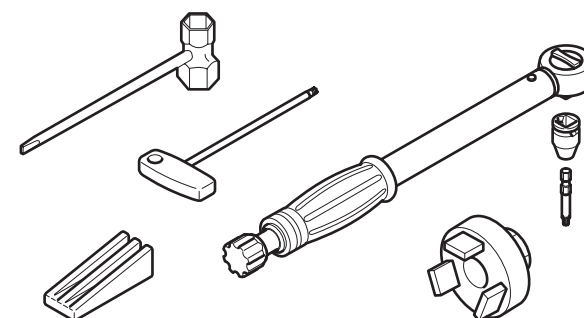
Push the disc washer 1 into the clutch.

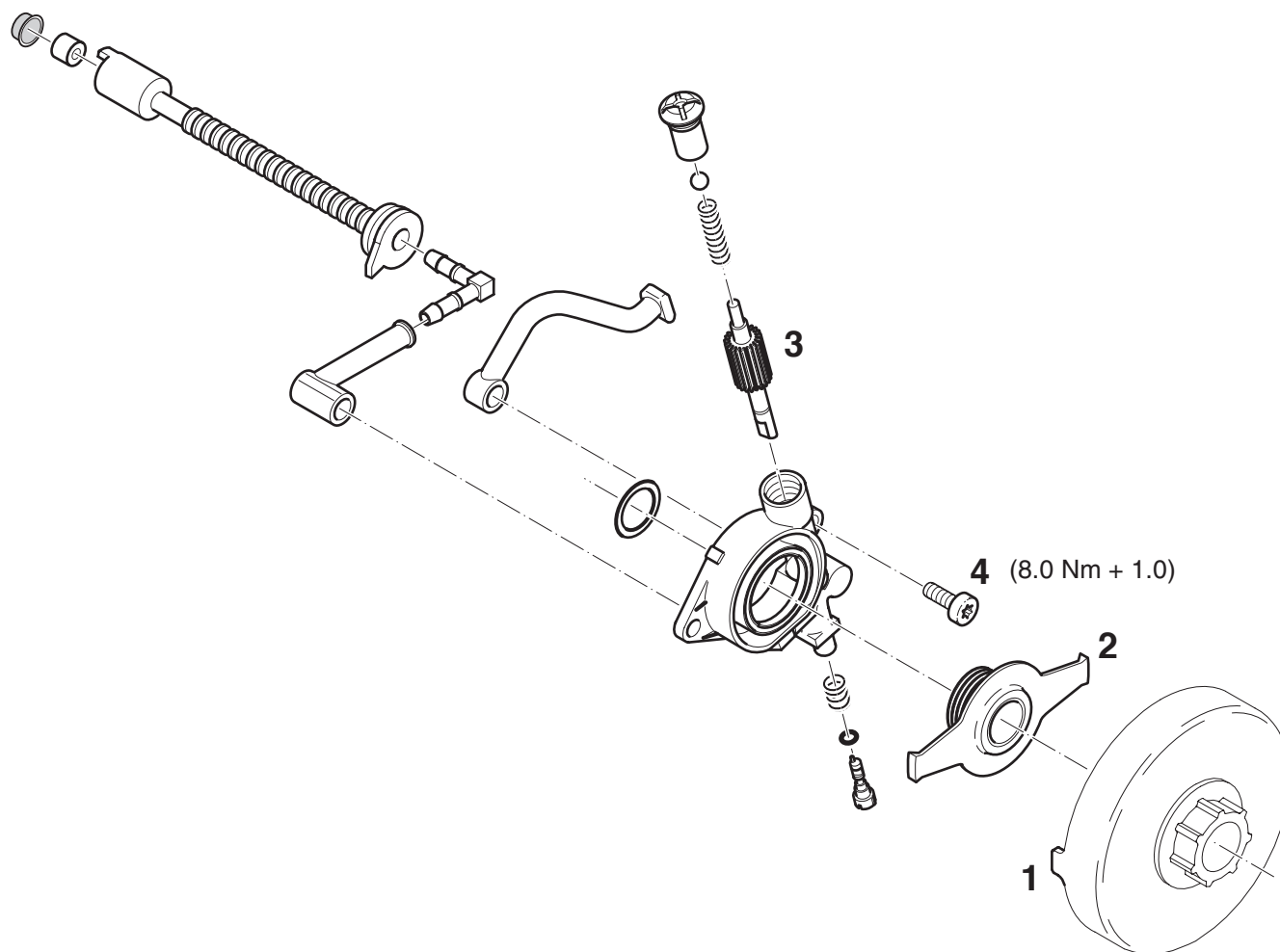
Use the assembly wrench (944.500.570) to tighten the clutch.

The lug 3 of the clutch drum should not be on the arms of the oil pump drive 2.

Replace the muffer gasket 4 (965.531.130).

Tool





General

The oil pump is driven by the clutch drum.

Lugs **1** on the clutch drum transfer power to the arms on the oil pump drive **2**. The drive worm of the oil pump drive engages in the teeth of the oil pump piston **3**.

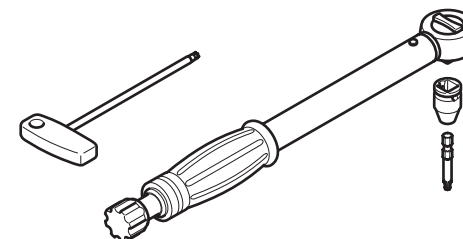
This means that oil is supplied only when the saw chain is moving.

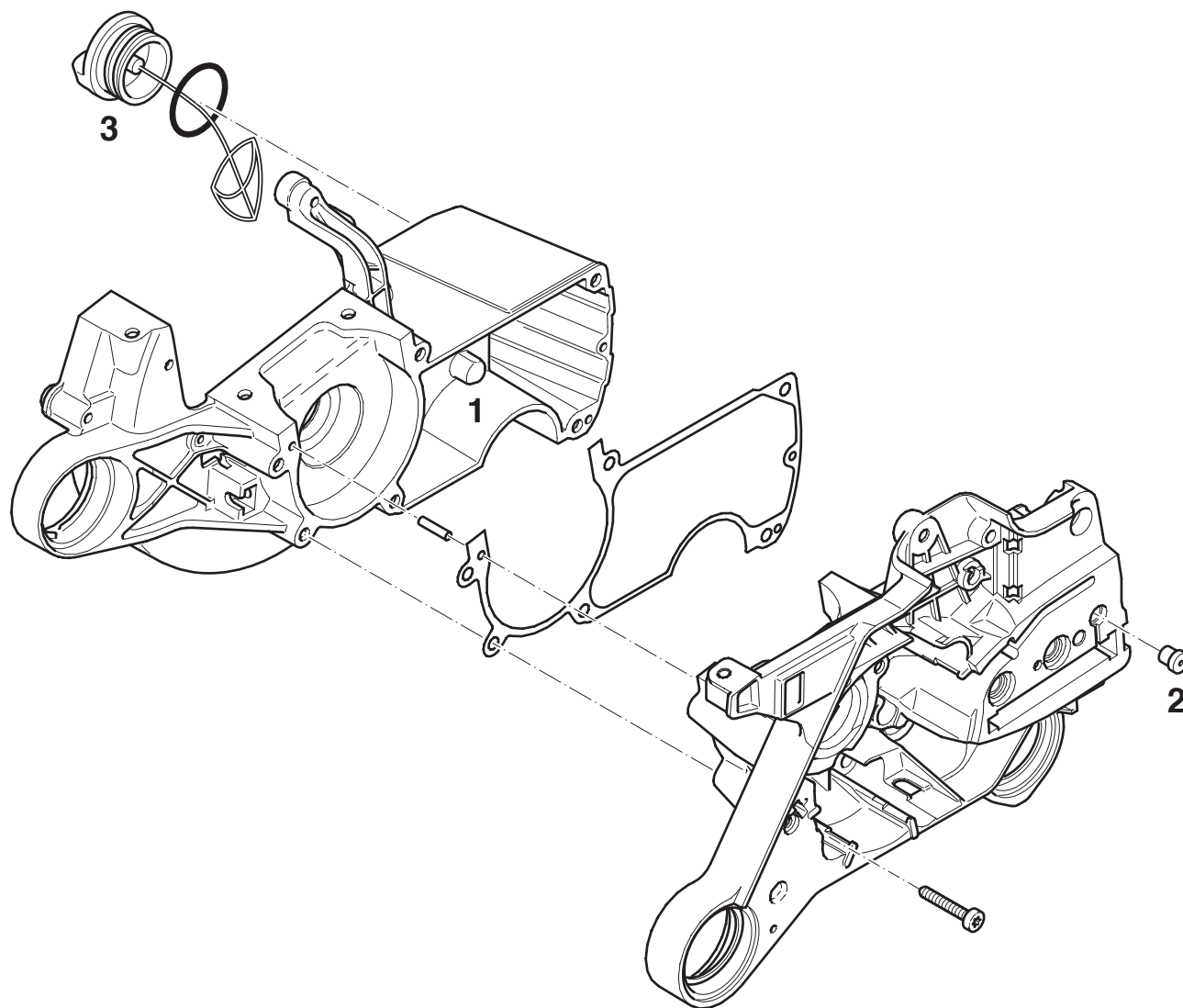
The oil pump is attached to the crankcase with 2 Torx screws **4** M5 x 12.

Removing the clutch drum, see page 11.

Removing the clutch, see page 15.

Tool





Oil tank

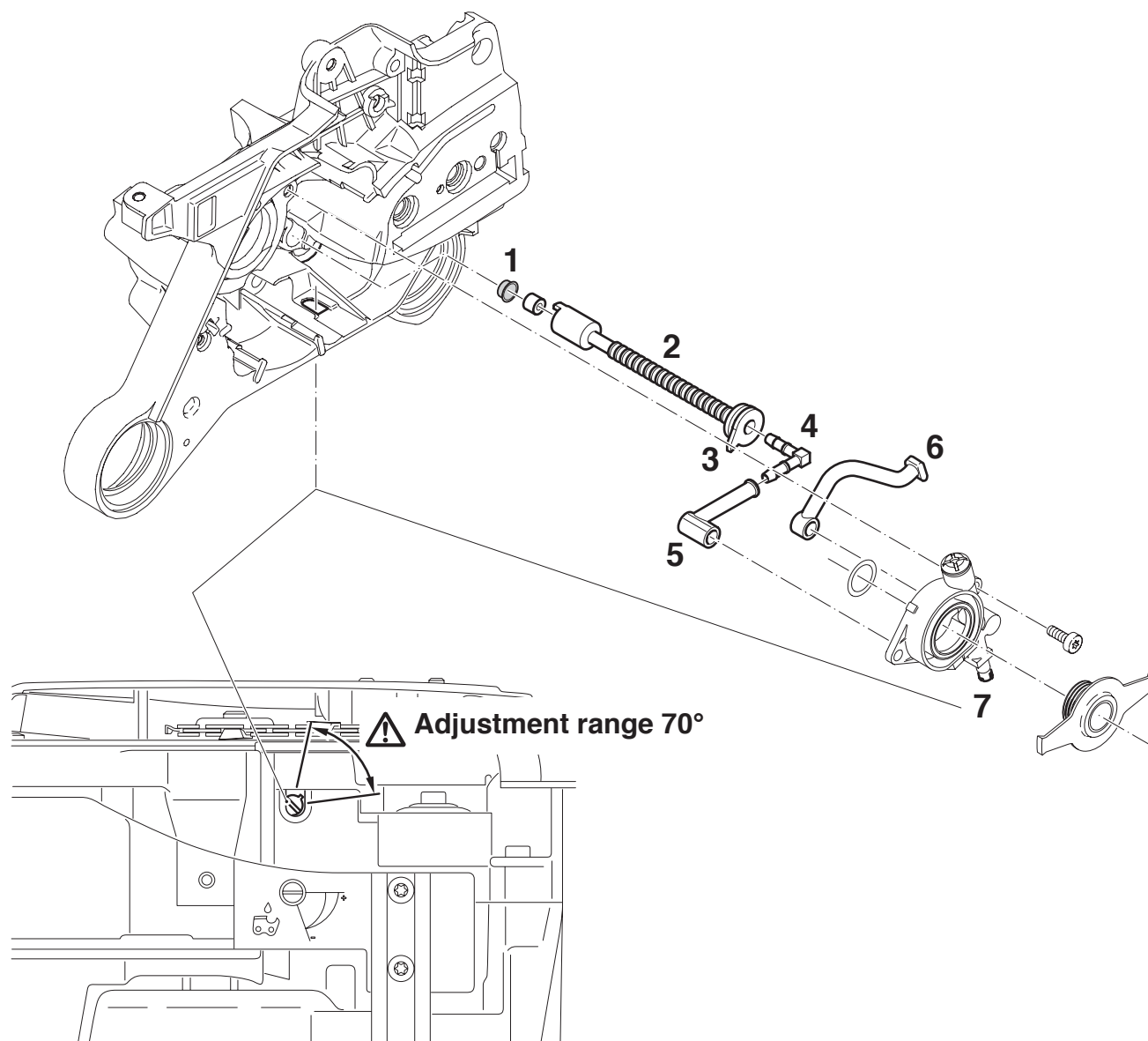
The oil tank **1** holds 0.42 liter and is formed by the halves of the crankcase.

The large oil tank cap **3** makes oil filling easy.

The oil tank is ventliated by valve **2** in the crankcase.

To replace it, drive the valve into the tank with a mandrel (**dia. 4 mm**) and press in a new valve from the outside with a mandrel (**dia. 8 mm**).

CAUTION: Use mandrel with planar surface!



Oil lines

The oil screen **1** must be cleaned periodically.

The oil suction line **2** connects the oil tank and oil pump.

When inserting the suction line into the hole in the crankcase coat the collar with silicone paste (980.007.100).

Note the position of the lug **3**!

Then insert the angle nipple **4** and oil hose **5**.

The oil pressure line **6** links the oil pump and the guide bar connection.

Adjusting the supply rate

CAUTION: The adjustment range is smaller than 1/4 turn (70°)!

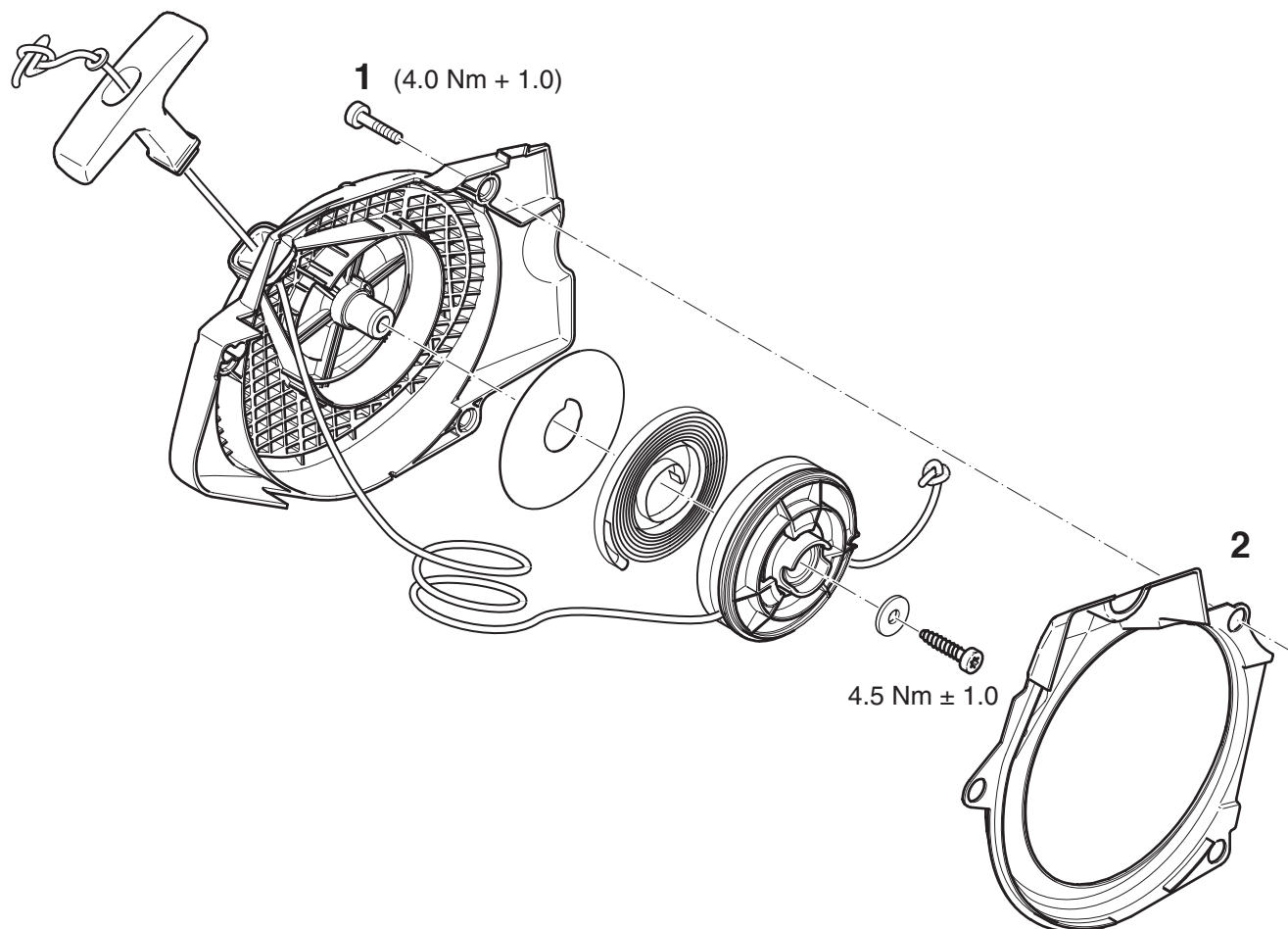
The oil supply rate is regulated with the adjusting screw **7**. The adjusting screw is on the bottom of the housing.

The oil pump is factory adjusted to a medium supply rate.

To change the setting, use a screwdriver (max. 5 mm tip) to turn the adjusting screw:

- Right for reduced oil supply
- Left for more oil supply

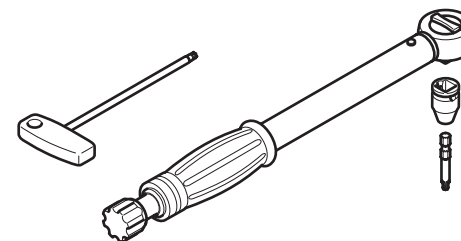
Even very small turns of adjusting screw **7** influence the amount of oil supplied to the bar and chain.

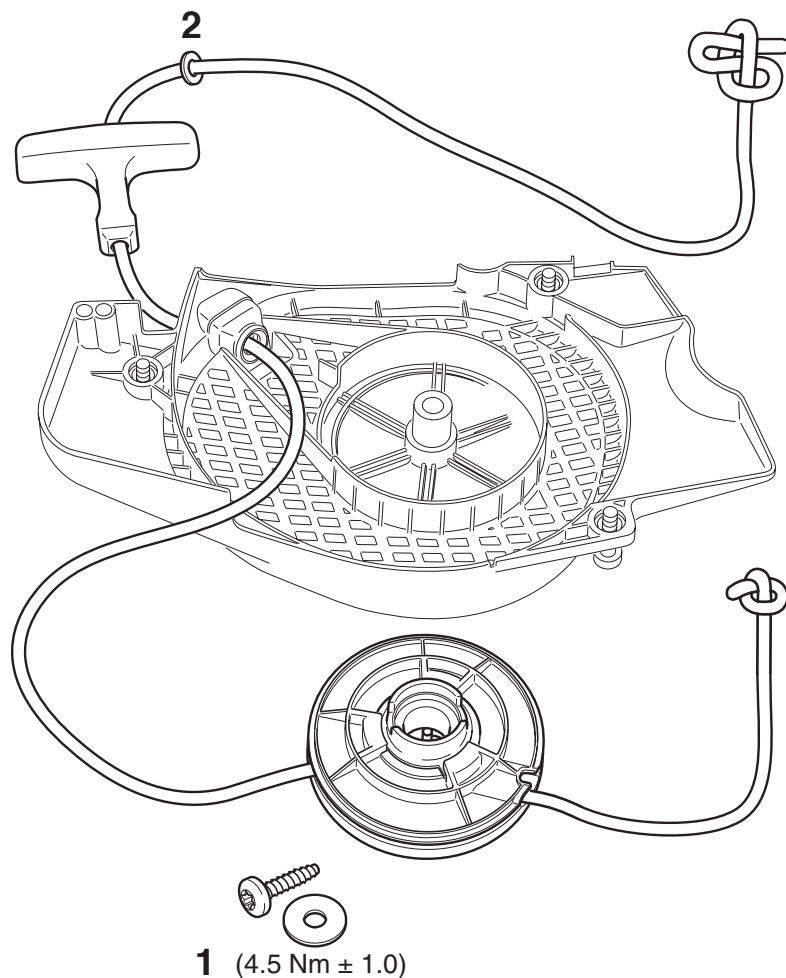
**Starter**

The fan housing is bolted onto the crankcase with 3 Torx/slotted screws **1** (M5x20).

Induction channel

The air duct **2** guides the inducted cool air to the cylinder for proper operation.

Tool



Replacing the starter cable

CAUTION: Injury hazard! Loosen and remove screw 1 after the rewind spring tension has been released.

Remove the cable drum **carefully**.

CAUTION: Injury hazard! The return spring can pop out!

Remove all pieces of the old cable.

Thread a new cable (108.164.020, dia 3.5 mm (1/8"), length 980 mm (39")) as shown in the diagram (don't forget washer **2**) and knot both ends.

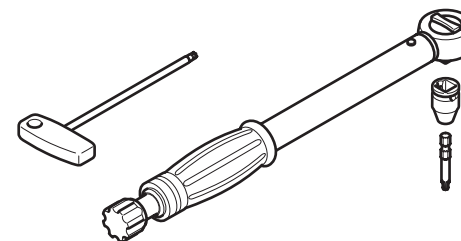
Put the cable drum on and turn it slightly until the return spring catches.

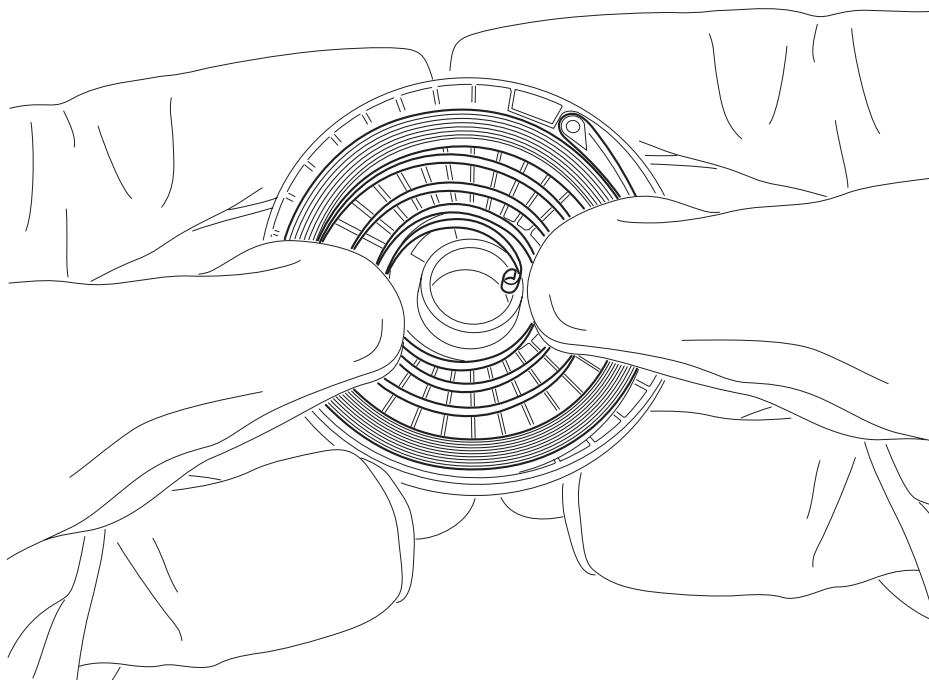
Screw in screw **1** with washer and tighten.

NOTE: With the starter cable pulled out all the way, it must still be possible to turn the cable drum at least another quarter turn against the spring force.

CAUTION: Injury hazard! Secure the starter handle when it is pulled out. It will be pulled back very quickly if the cable drum is inadvertently released.

Tool





Replacing the return spring

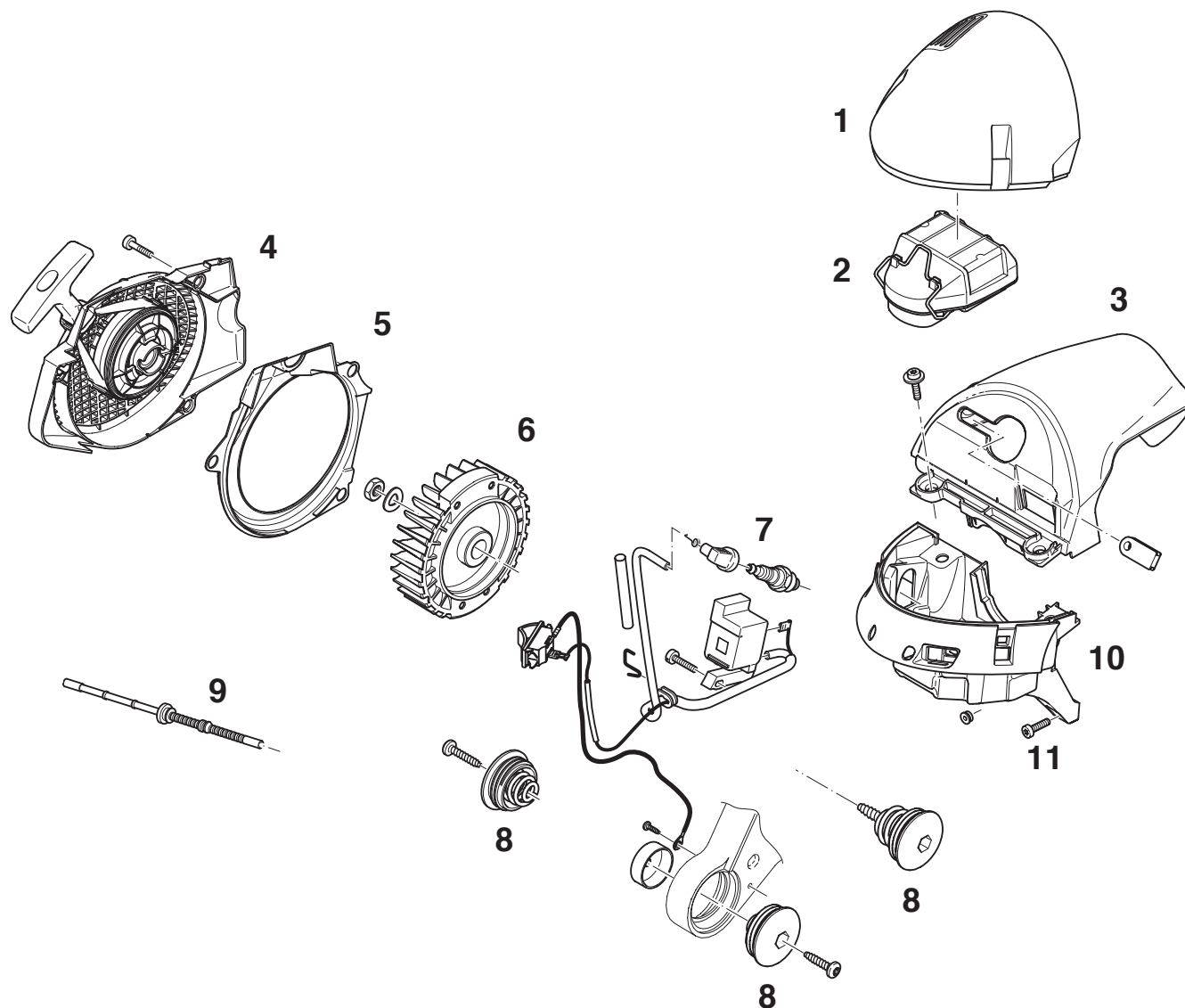
Disassemble the fan housing and cable drum, see Page 21.

Careful: The spring is under tension and can pop out when removing the cable drum.

CAUTION: Injury hazard! Broken springs can pop out! Wear protective goggles and protective gloves!

Replacement return springs are delivered pre-tensioned in the cable drum. **CAREFUL, the spring can pop out.** If it does, it can be put back in as shown in the diagram.

Before installing the new return spring and the spring cartridge in the fan housing, grease both lightly with multipurpose grease (944.360.000).



Inspecting the ignition system

Disengage the chain brake. Remove screw and bushing (items 1 and 2, Page 14).

Remove the tubular handle.

Remove filter hood **1** and air filter **2**.

Remove protective hood **3** (push spark plug socket with wire grommet through the opening).

Unscrew the spark plug **7**.

Remove fan housing **4** and air duct **5**.

Remove the flywheel **6** with the disassembly mandrel (944.500.880), see Page 26.

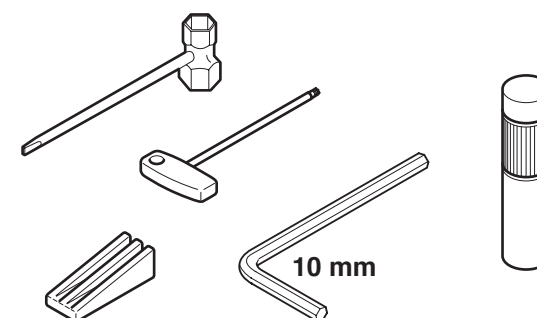
Unscrew the vibration damper **8** (3 pieces, see Page 33).

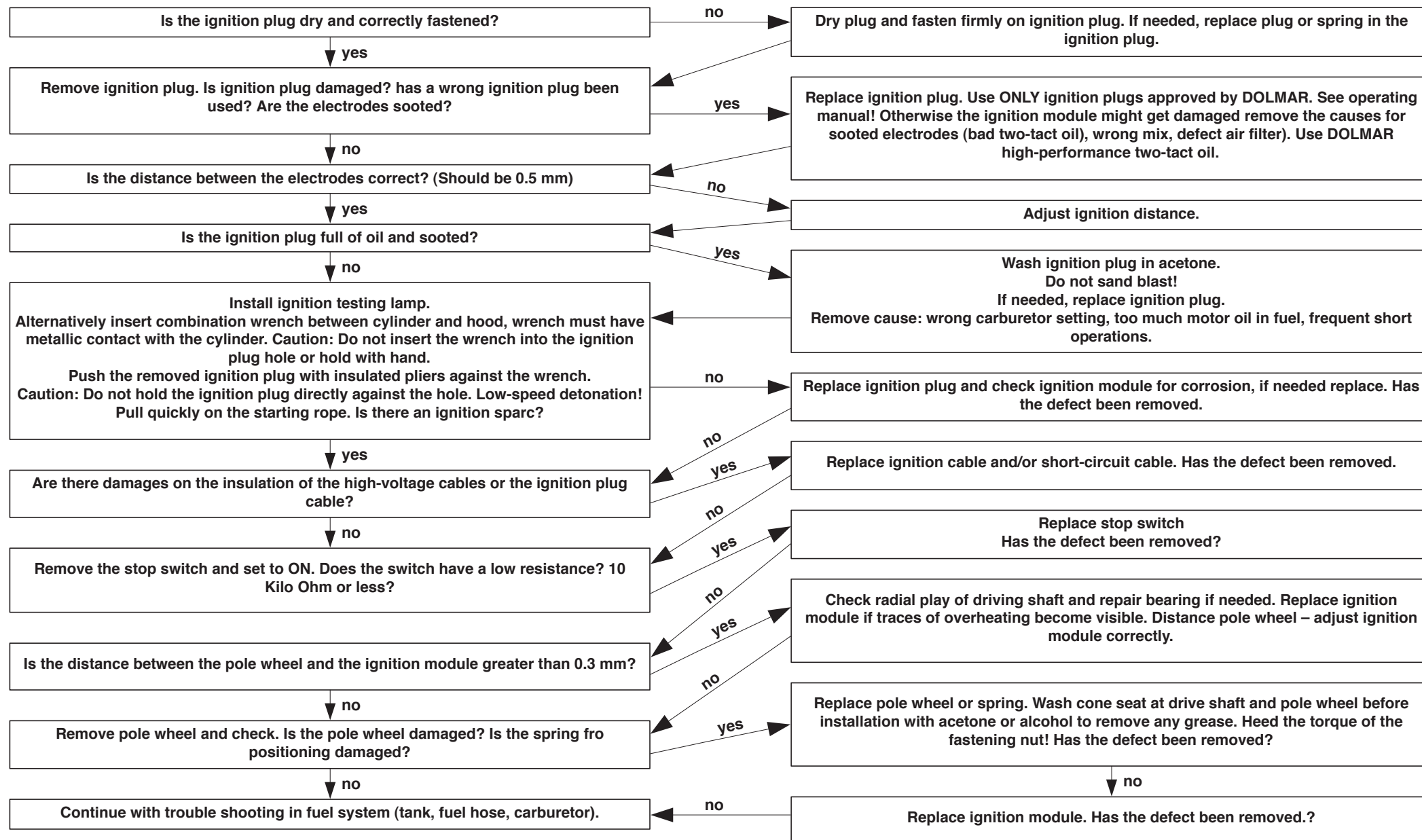
Separate the tank and engine unit. To do this pull the wire terminals off the short-circuit switch and pull the fuel line **9** from the carburetor and then out of the carburetor base **10**.

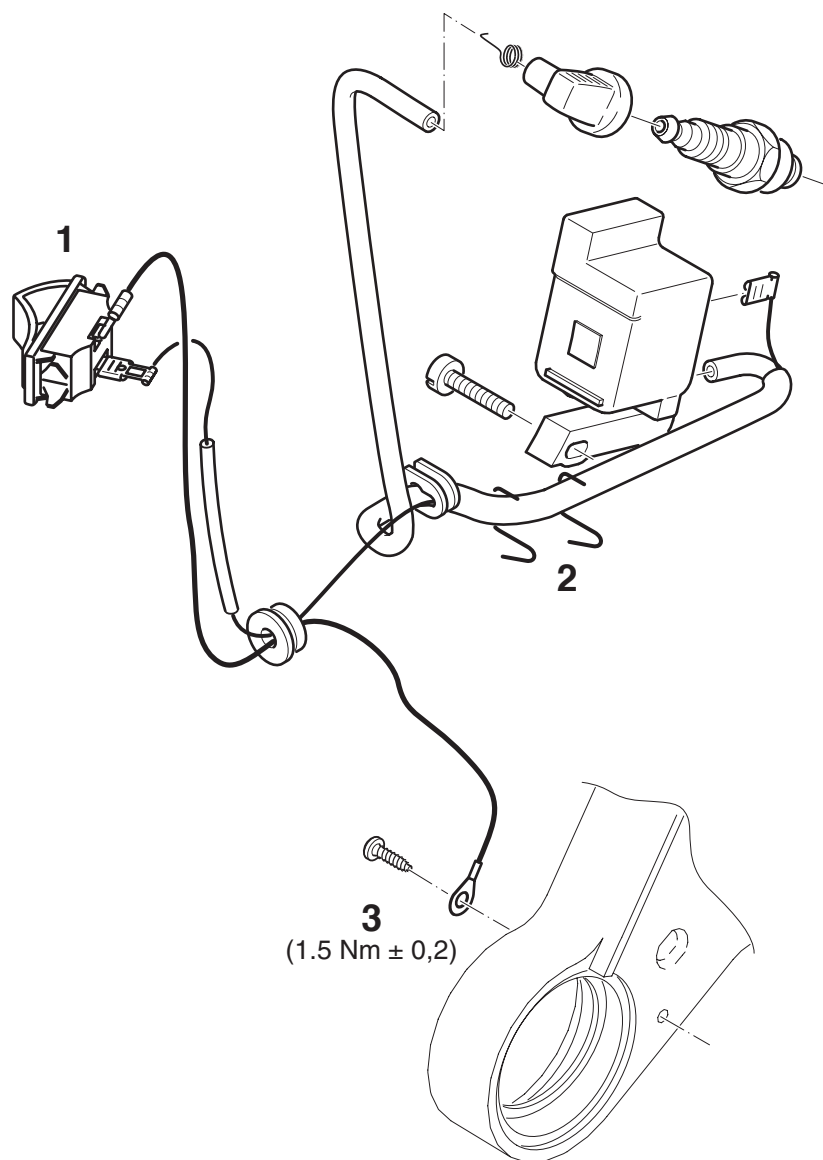
Loose the bowden cable with a needle nose plier.

Unscrew screws **11**. The carburetor base can now be lifted slightly so that the wires can be pulled through.

Tool







Cable harness

The high tension lead and short circuit wire are supplied as a wiring harness.

Before turning the high tension lead into the ignition coil, fill the in-screw-hole with silicone paste.

NOTE: Make sure that switch 1 is in the correct position, with the stop arrow in direction to the starter!

Use clamp 2 just once. Push it into the hole in the crankcase with a screwdriver.

Ground connection with slotted screw 3 (3.5 x 9.5 mm).

Always make sure there is a good ground connection!

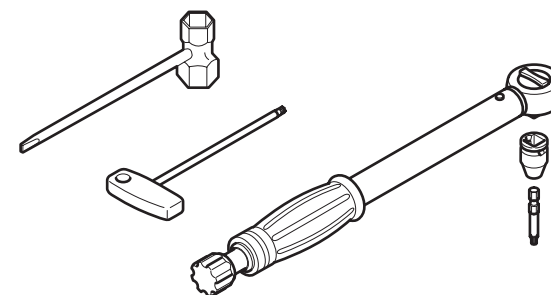
Spark plug

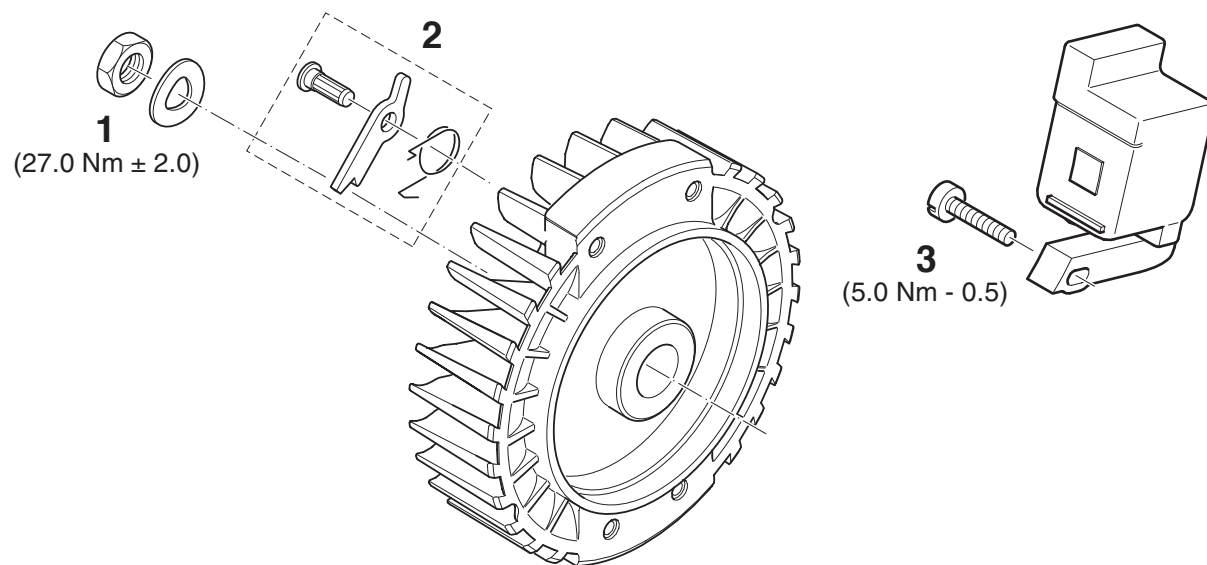
NGK **BPMR 7 A** (965.603.021)

BOSCH **WSR 6F** (965.603.014)

Electrode gap 0.5 mm

Tool





Flywheel

Disassembly

Loosen the flywheel flat nut **1** (M8 x 1). Block the engine (see page 15).

Screw mandrel onto crankshaft. Leave about 2 mm interval between the flywheel and the mandrel.

Hold engine in your hand or place it on a soft surface, and loosen the flywheel with a hammer blow on the disassembly mandrel.

Use pawl set (108.166.051) with pin **2** for replacement.

The woodruff key is cast into the flywheel.

CAUTION: Watch for the right fitting of the flywheel.

Clean the crankshaft cone well.

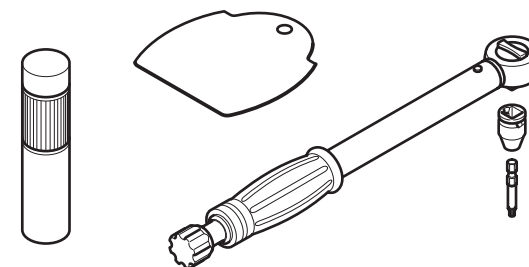
Tighten flat nut **1** (M8 x 1) with torque wrench.

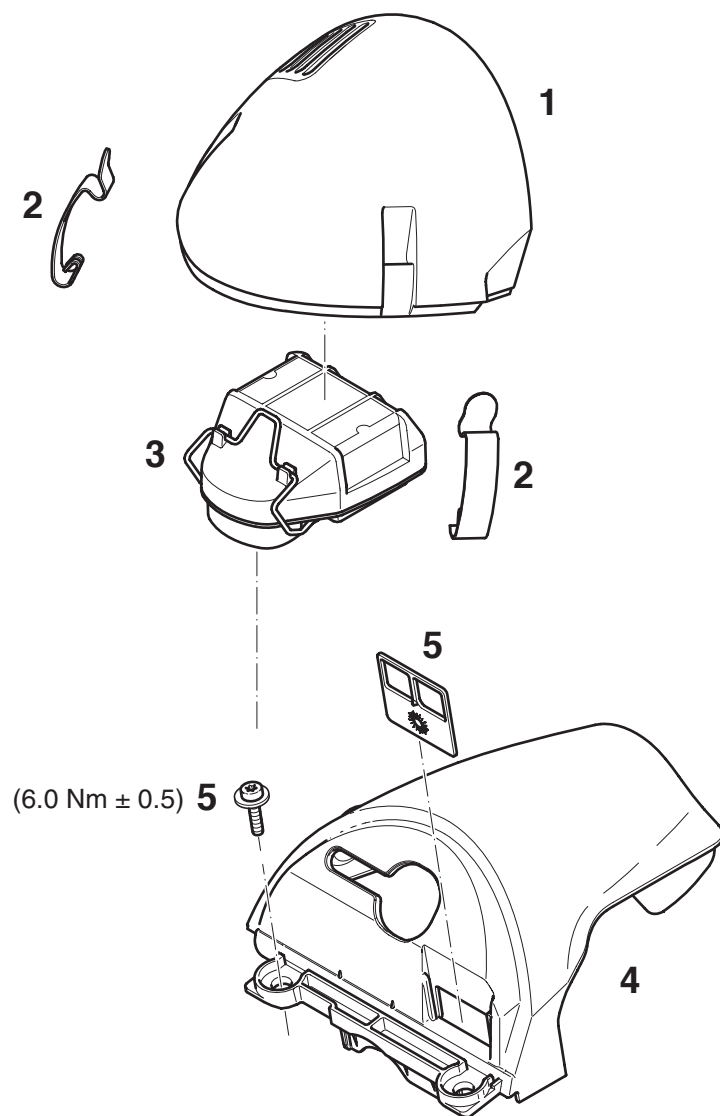
Set gap to 0.3 mm

Place gap gauge (944.500.891) between the flywheel magnets and the ignition coil.

Push the ignition coil against the flywheel and tighten screws **3** (M4 x 20).

Tool





Air filter system

Combustion air is inducted at the top left through the filter hood **1** (or out of the cylinder chamber for winter operation **5**).

The clamps **2** must be tight enough to require a tool for loosening.

Air filter

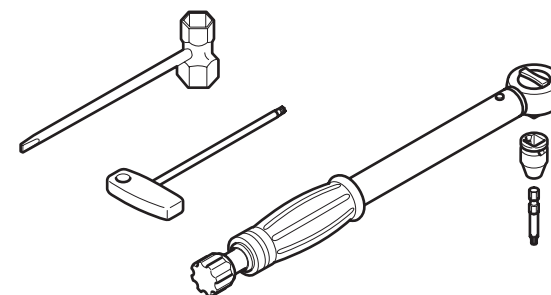
Clean the air filter **3**, see Instruction manual.

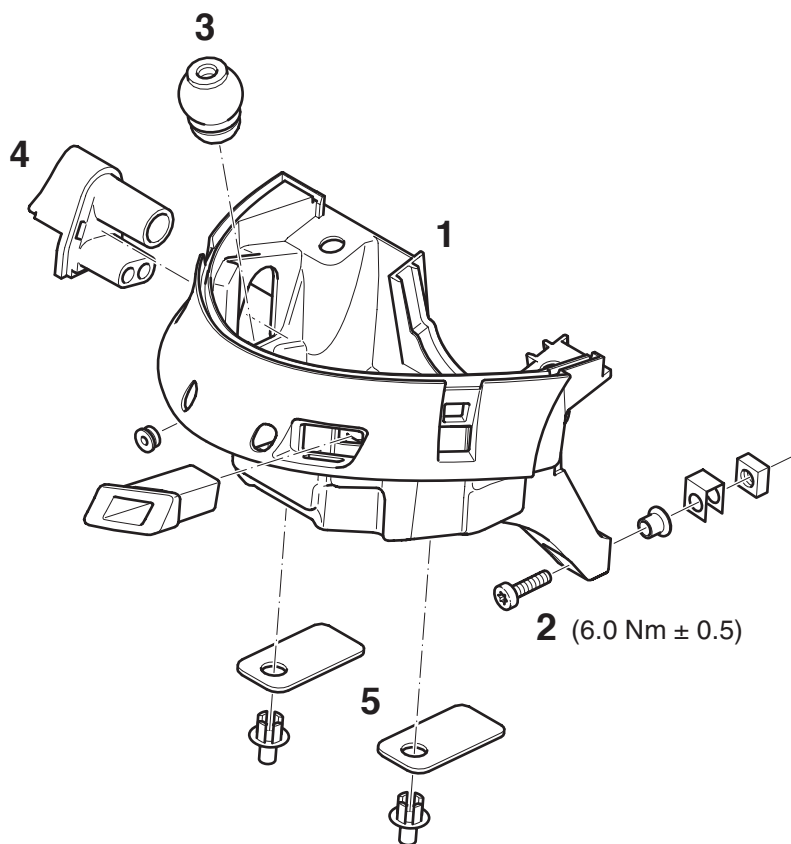
Protective hood

Disassemble hand guard (see page 14).

The protective hood **4** and carburetor base are fastened to the crankcase with 2 Torx screws **5** (M5 x 20) with loss-proof washers.

Tool





Carburetor base

The carburetor base **1** is fastened to the crankcase with 2 Torx screws **2** (M5 x 20).

Push the holder for the intake manifold **3** into the carburetor base with silicone paste.

The adjustment guide **4** is pushed in from the outside with the starter assembly removed.

Airmaster

In idle the rubber flap valves **5** open.

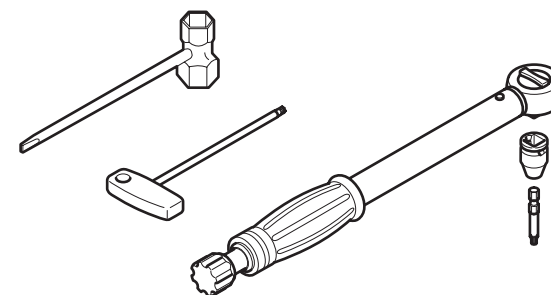
Any dirt in the carburetor area will fall out through the rubber flaps and the carburetor base.

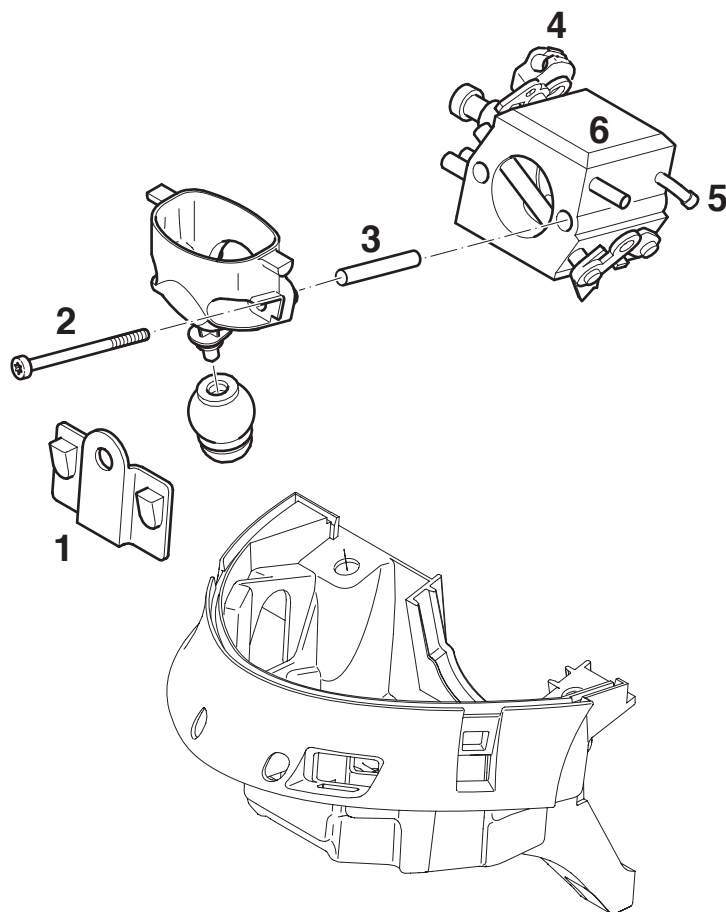
As engine speed increases the valves will shut.

Periodically check the rubber valves for damages, and replace when necessary.

For disassambling press out the rivets.

Tool





Removing the carburetor

Disengage the choke lever (pull out and turn clockwise).

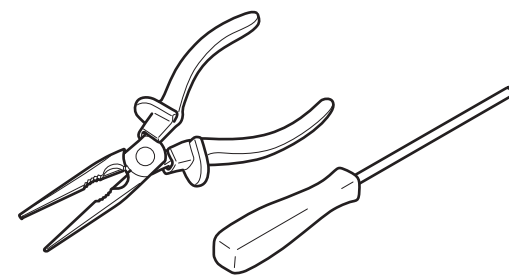
Use needle-nose pliers to remove:

- Plug 1
- Bowden cable 4
- Fuel hose 6
- Impulse hose 5

Unscrew fastening screws 2.

Pull carburetor up and out with the manifold.

Tool

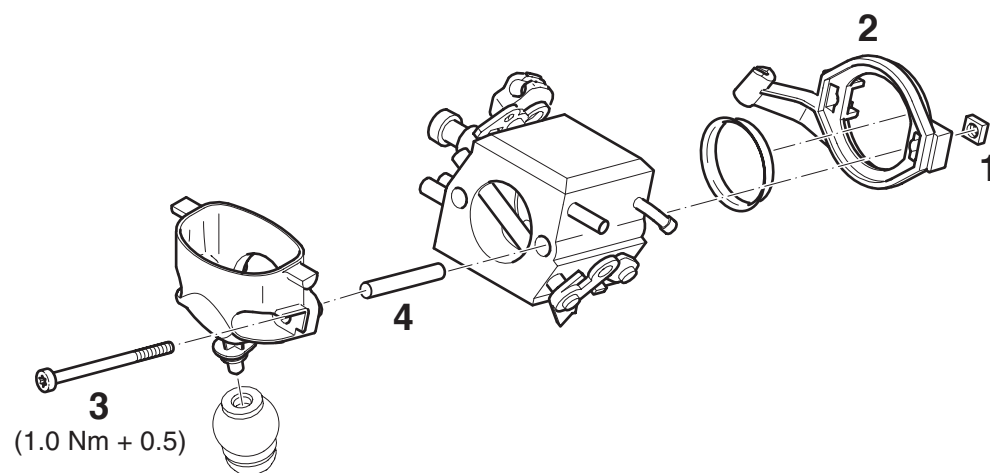


Induction channel

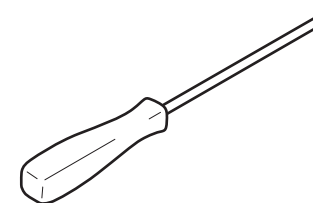
The carburetor and the manifold are screwed to the flange ring **2** with two screws **3** (M4 x 55) with countersunk square nut **1**.

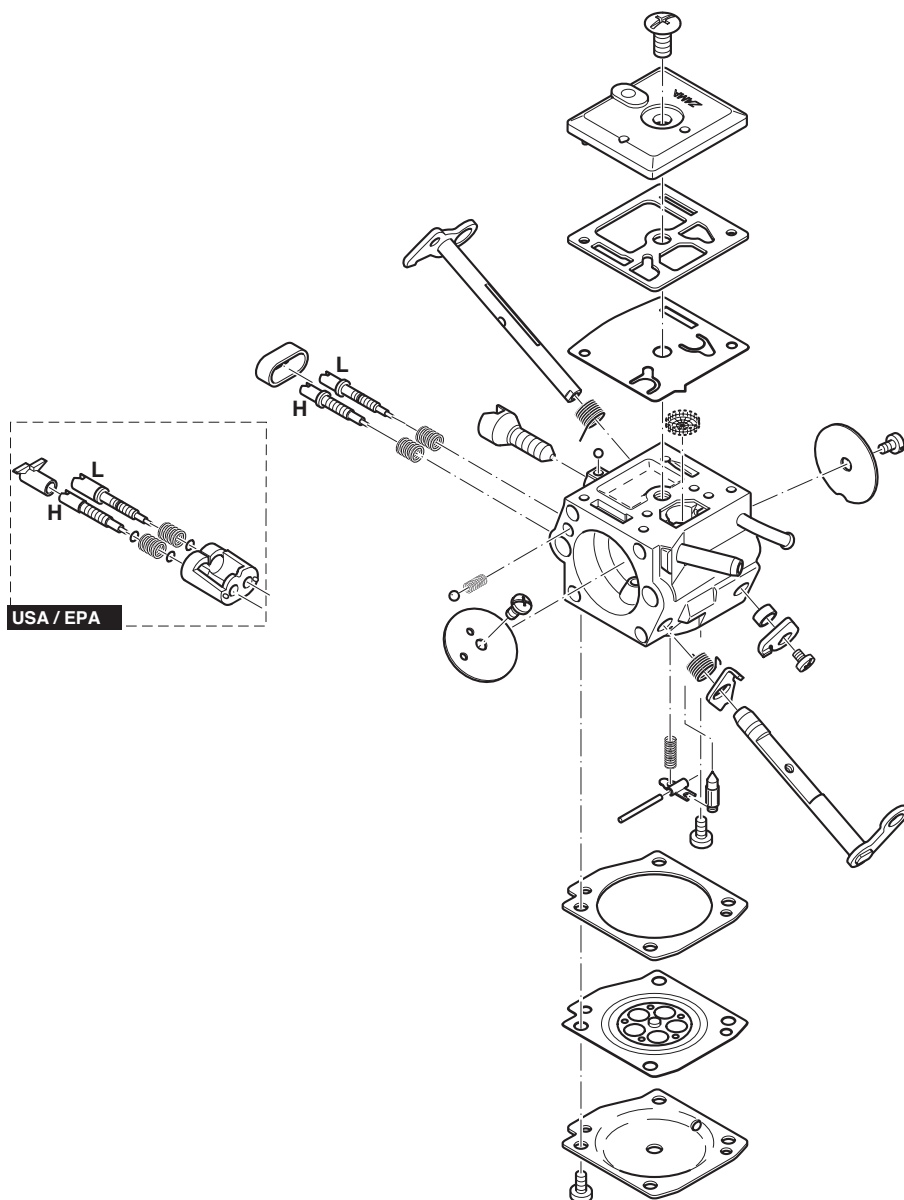
During assembly, tighten screws **3** only to 1.0 Nm + 0.5.

CAUTION: Don't forget the bushing 4!



Tool





Carburetor

Carburetor with choke valve
USA Version with Limiter Caps

Factory setting:

L = 1

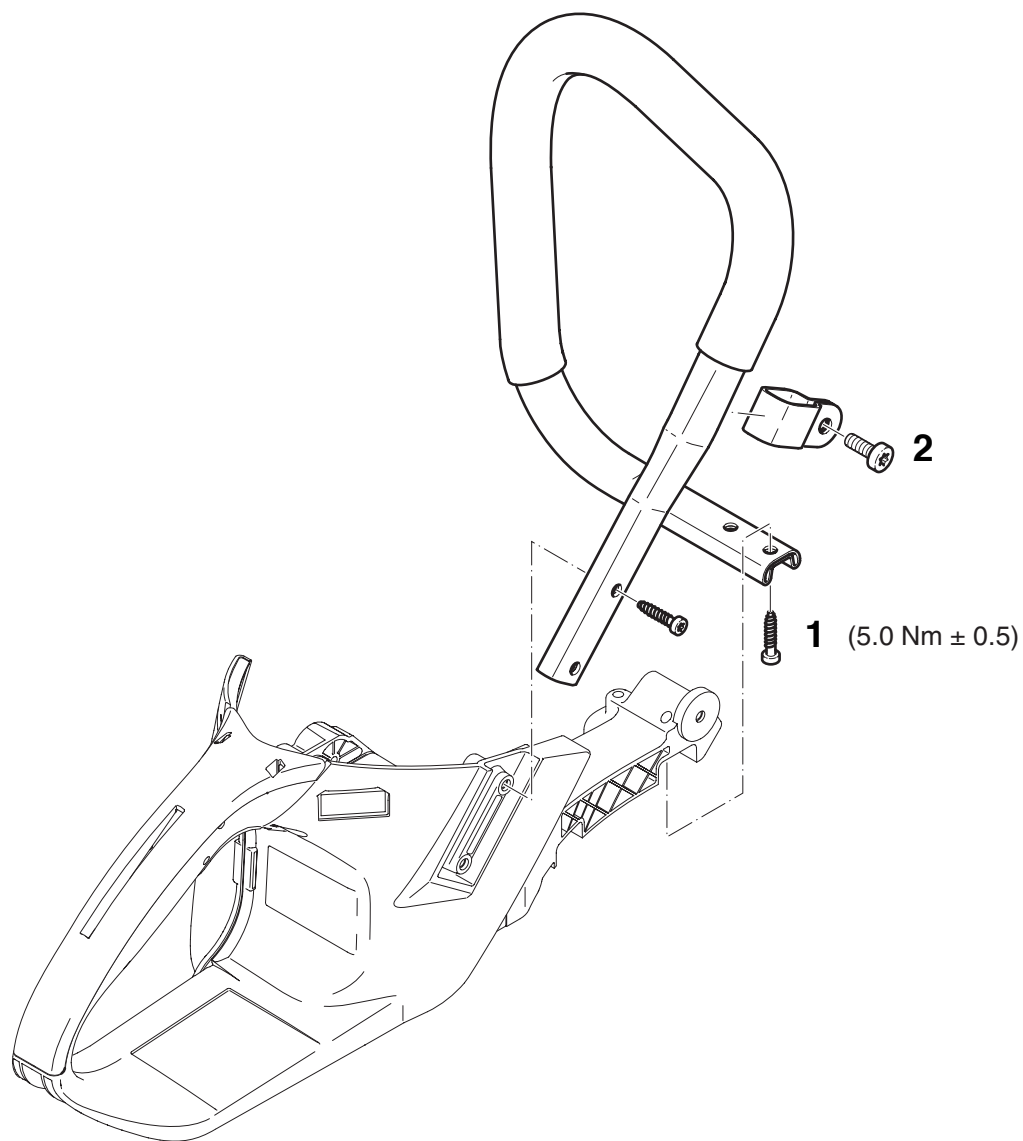
H = 1 1/8

Idle speed 2500 rpm

Max. speed 13500 rpm

Electronic speed limiter

NOTE: Always use a tachometer when adjusting the carburetor!



Handles

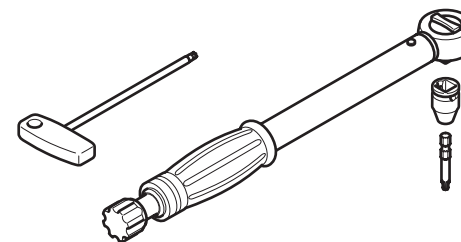
Forward tubular handle of aluminum tubing with synthetic sleeve.

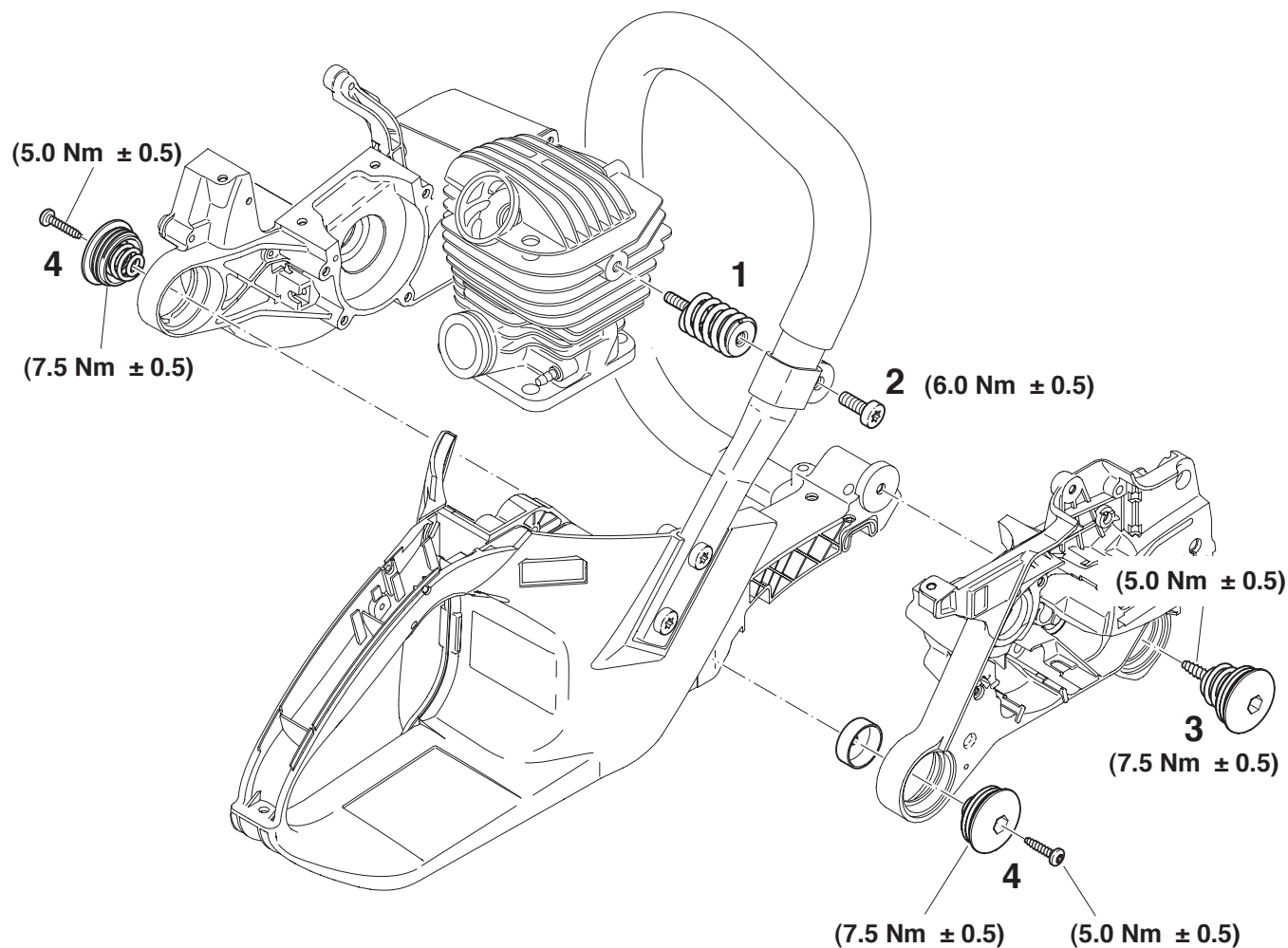
Assembly with 4 Torx screws **1** (5.5 x 20).

Clamp is fastened to the tubular handle with a Torx screw **2** (6 x 14).

Clamp is asymmetric, fixing Point of the clamp must face off the cylinder.

Tool





Damping system

Vibration damping using the **DOLMAR 2-mass system (D2M)**.

Spring 1 tubular handle/cylinder is attached with Torx screw 2 (M6 x 14).

Replace forward clutch-side spring 3 (038.114.130) complete with screw and cap.

Rear clutch-side spring is fastened with Torx screws 4 (M5.5 x 20) (small screw head).

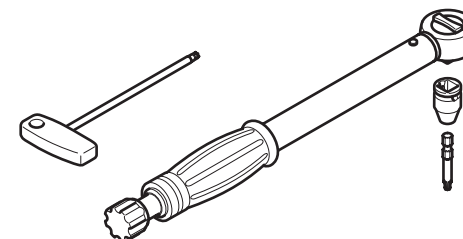
Removing and reinstalling the spring caps

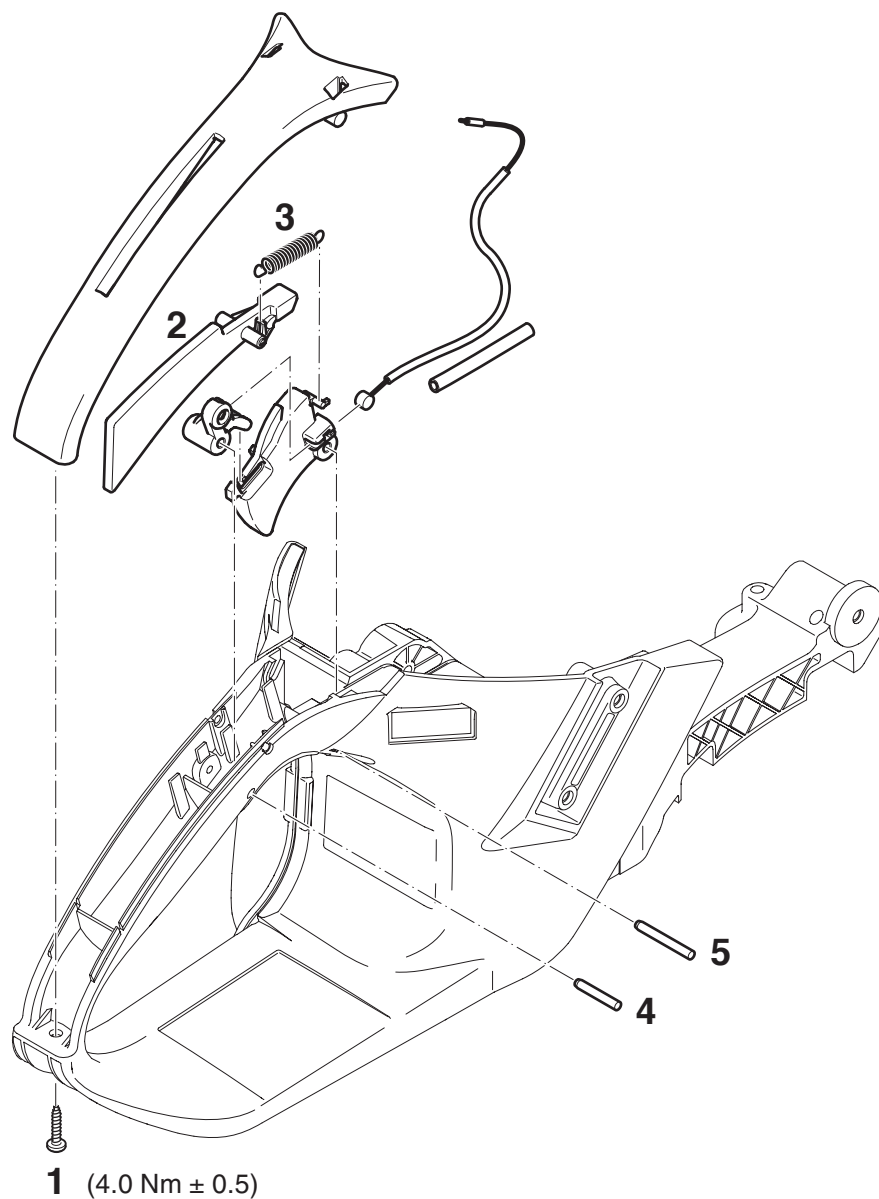
First loosen the inside Torx screws, then unscrew the caps with 10 mm Allen key.

If the Allen key is overwinding, spray the cap with ice spray and try it again.

To assemble, first tighten the caps to $7.5 \pm 0.5 \text{ Nm}$, then tighten the Torx screws to $5 \pm 0.5 \text{ Nm}$.

Tool





Grip mechanism

The throttle trigger is linked to the carburetor by a Bowden cable.

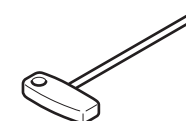
The grip shell is attached to the tank with a Torx screw **1** (4 x 20 mm).

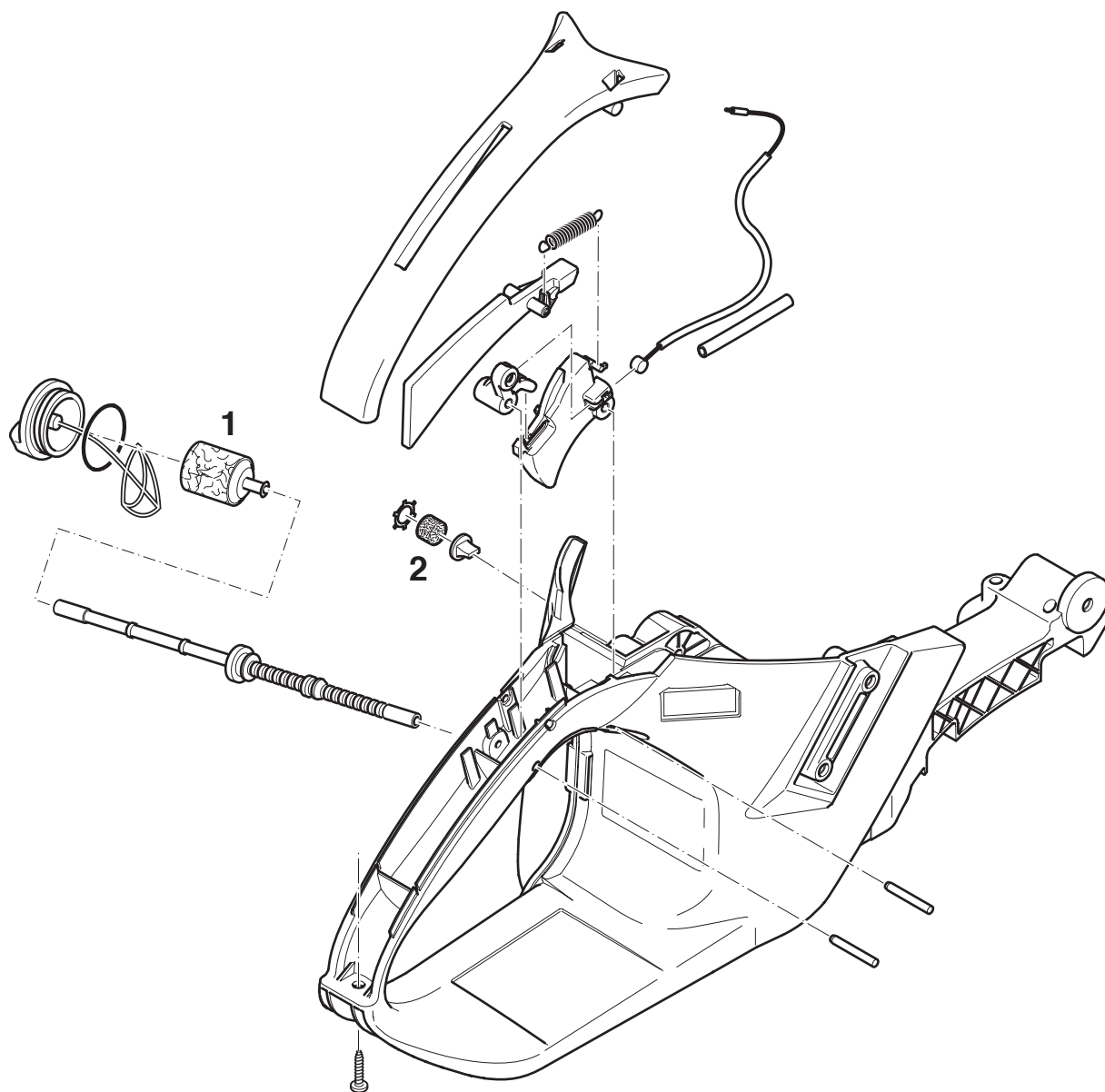
Disengage the throttle lock **2** and spring **3**.

Check for ease of motion and functioning of the safety throttle lock spring **3**.

To replace the throttle trigger and throttle lockon lever drive out the cylinder pins **4** (3 x 24 mm) and **5** (3 x 38 mm) with a mandrel (\varnothing 2 mm).

Tool





Fuel tank

Capacity 0.75 liter

Replace the fuel filter **1** every 3 months.

Removal:

Disassembly the Starter assy, see page 20.

Remove tubular handle and vibration damper.

Remove carburetor adjustment guide.

Disengage Bowden cable at carburetor.

Remove fuel line from carburetor.

Remove short-circuit switch and pull off wire.

Detach ground wire from housing.

At machines with heated handles, detach cable from heated handle switch.

Installation:

Push fuel line through carburetor base.

Position complete forward clutch-side damper.

Insert rear clutch-side and magneto-side damper bushings, start screws.

Tighten bushings.

Tighten screws.

Connect short-circuit wire with switch.

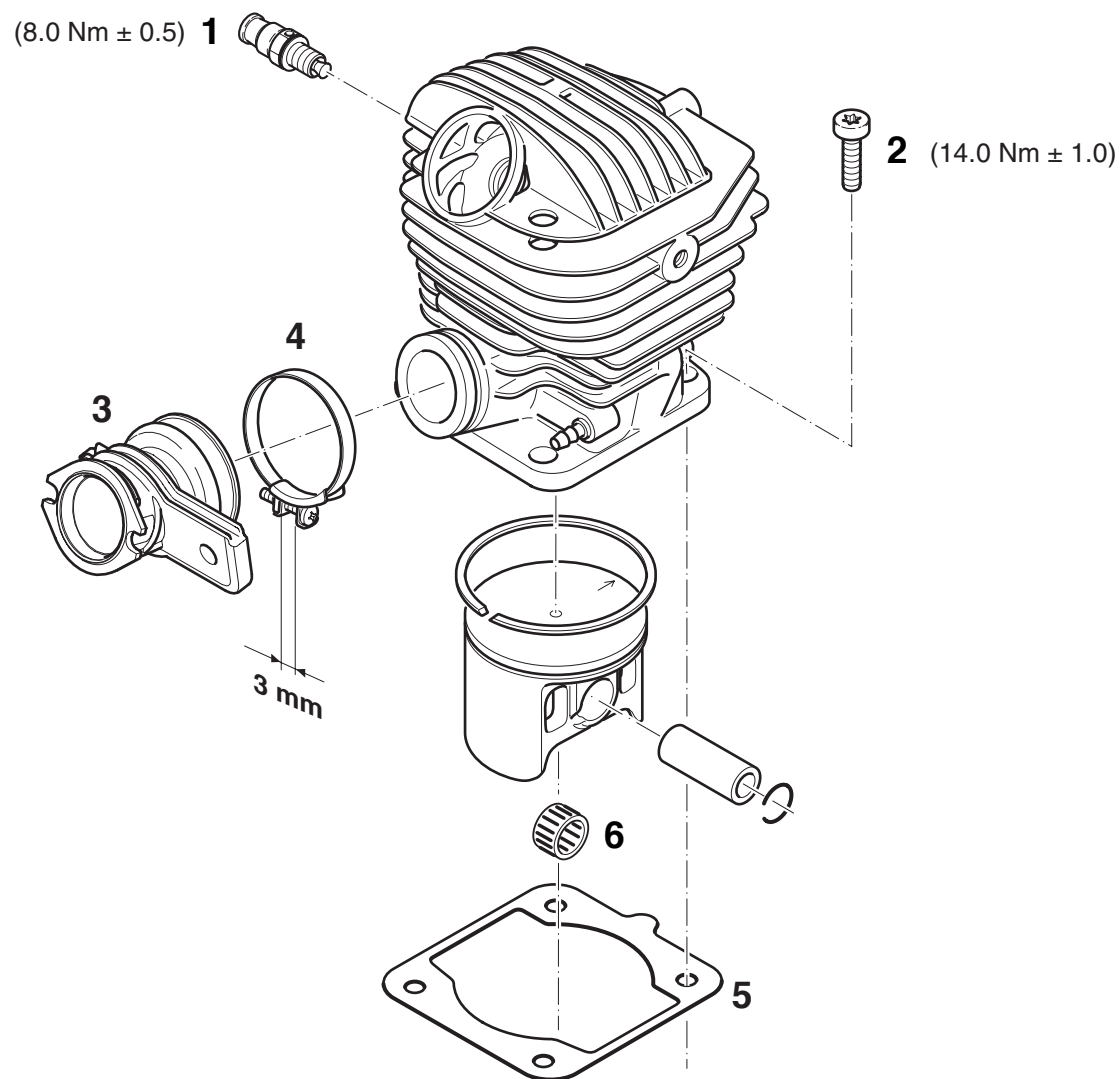
Engage throttle Bowden cable.

Connect fuel line to carburetor.

Insert carburetor adjustment guide.

The fuel tank air valve **2** acts only as ventilation.

NOTE: Fuel tank air valve 2 is supplied as a complete unit. To replace it, it is necessary to remove the tank.



Cylinder / Piston

Disassembly the Starter assy, see page 20.
The arrow on the piston points to the exhaust.
Check the piston ring joint: max. gap 0.5 mm

Decompression valve

The decompression valve **1** greatly reduces the effort required for starting and thereby reduces wear and tear on the starter.

Removing the piston

Remove C-rings 12 x 1 and drive out the piston pin with disassembly mandrel (ø 10 mm). Never use the c-rings twice.

Check the ring groove, clean if necessary.

Assembling the cylinder

Use a new gasket **5** (965.531.121) for each assembly instance.

Before assembly, lubricate the big end bearing **6** and cylinder bore with two-stroke oil.

Use the piston ring tension band and assembly tool (944.600.001).

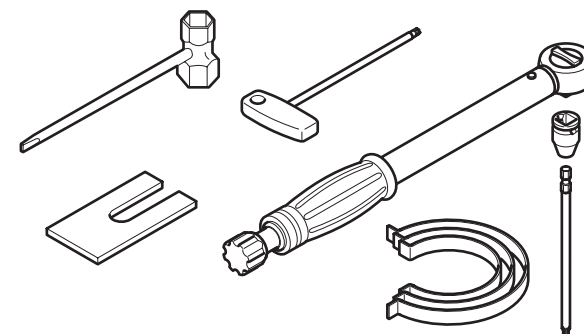
The cylinder is screwed to the crankcase with 4 Torx screws **2** (M5 x 20).

Assembling the induction hose

The induction hose **3** is fixed to the cylinder with a hose clamp **4**.

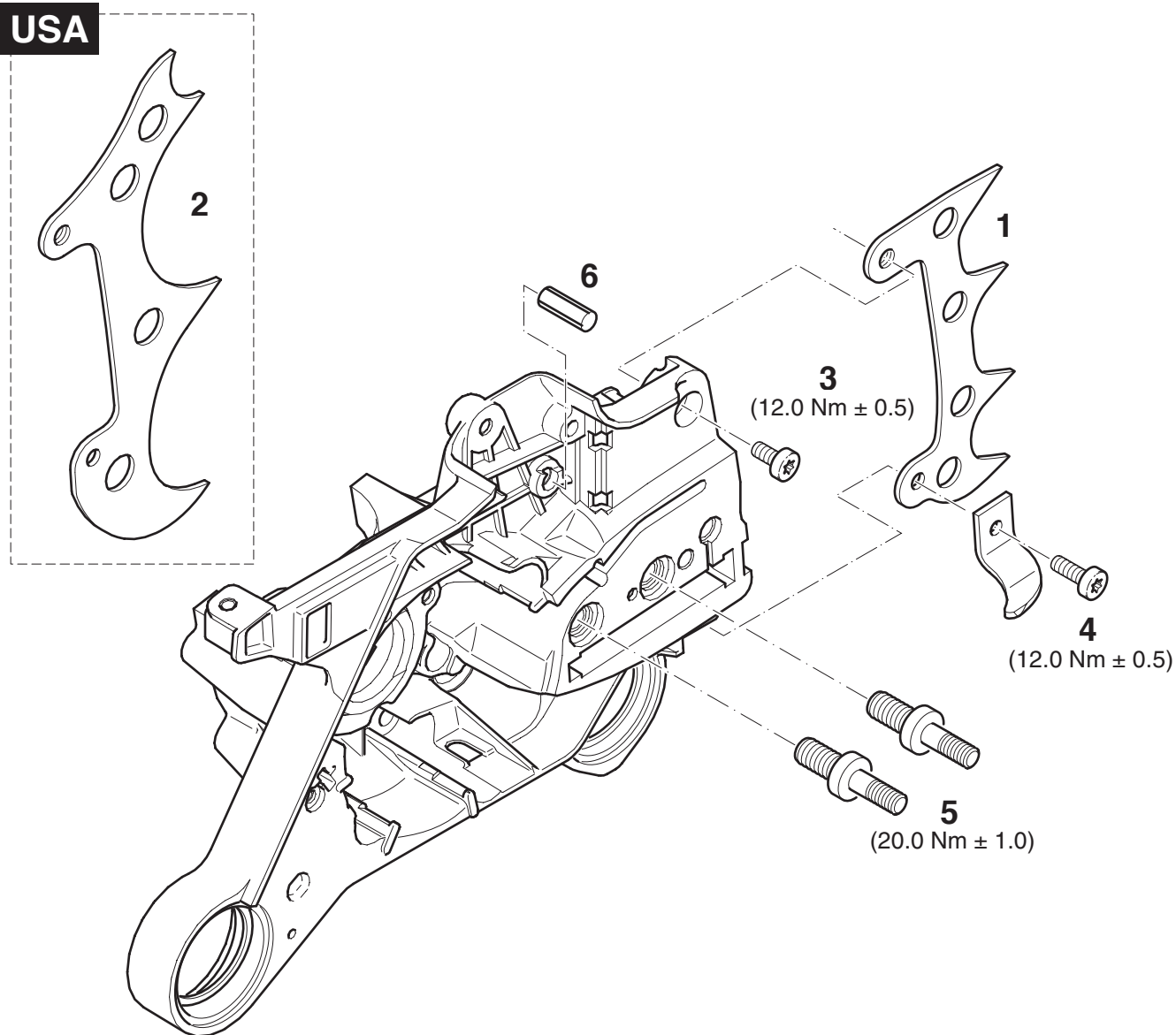
Tighten the hose clamp until it has a gap of 3 mm.

Tool





USA



Outside components

A second spike bar can be added to the sprocket guard (see spare parts list).

The spike bar is an important working aid in Europe (version 1) and the US (version 2).

Bolt it to the crankcase with Torx screw **3** (M5 x 12) above and Torx screw **4** (M5 x 16) below.

Secure screws **3** and **4** with "Loctite 243" (980.009.000).

Replacing the guide bar bolts

The two guide bar bolts **5** can be replaced. To disassemble the bar bolt, counter two M8 nuts. Carefully remove any residue without damaging the threads. If necessary rework the threads.

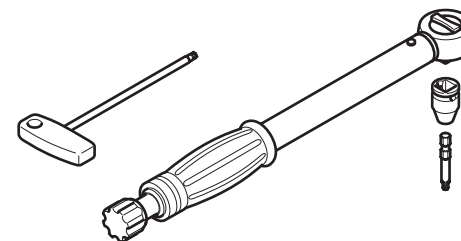
If the threads are severely damaged the crankcase will have to be replaced.

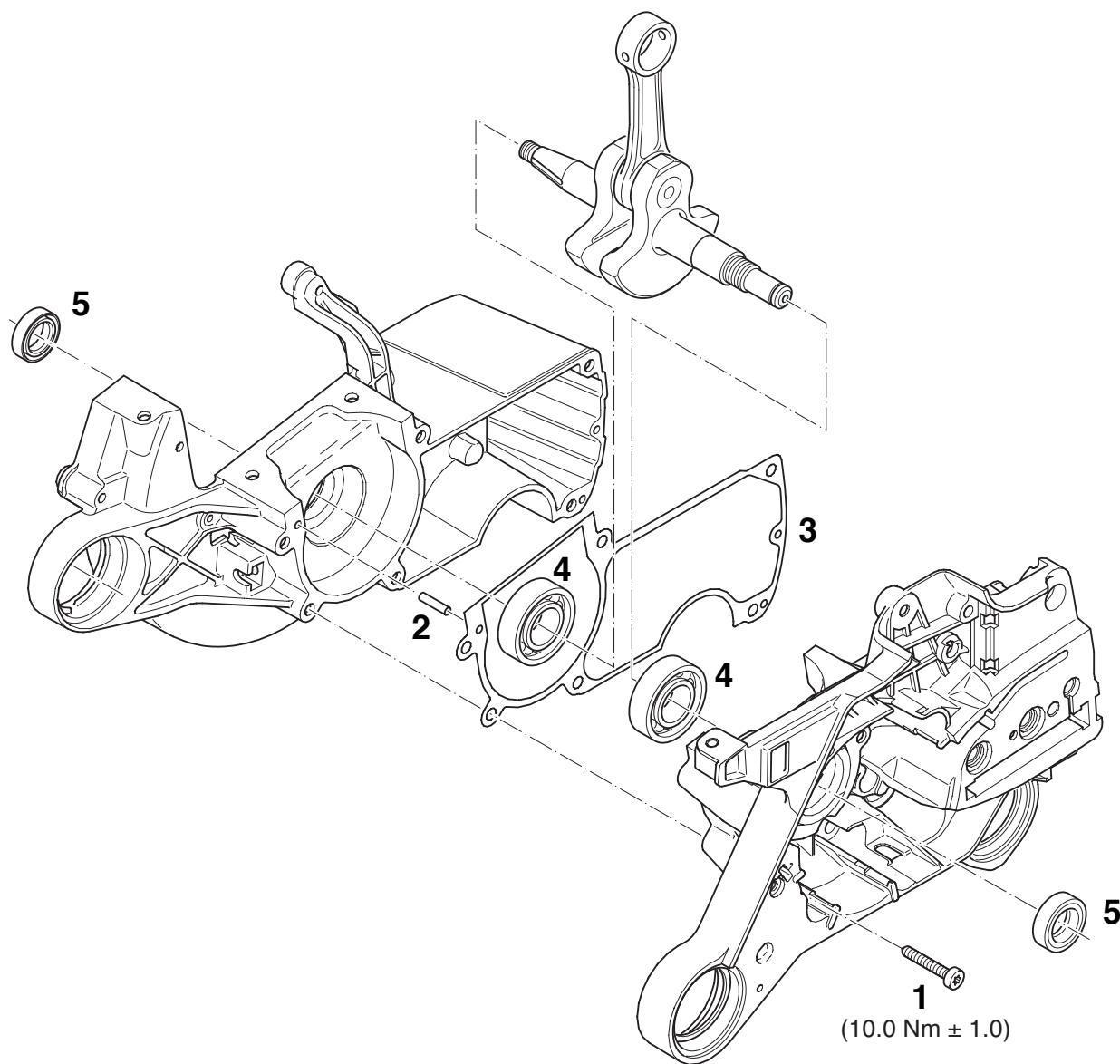
Secure guide bar bolts **5** with "Loctite 243" (980.009.000).

Slotted pin **6** for the chain brake mechanism.

For disassembly see Page 13.

Tool





Crankcase

The clutch-side and magneto-side crankcase halves can be individually replaced.

They are bolted together with 6 Torx screws **1** (M5 x 30).

Pinned distortion-free with 2 spiral spring pins **2** (3 x 16 mm).

Always apply a dry new gasket **3** (038.111.042).

Cut off the excess gasket after crankcase assembly is complete.

Replacing the radial ring

A new radial ring puller is in progress.

Fill new radial ring **5** with grease and insert in crankcase with the special tool.

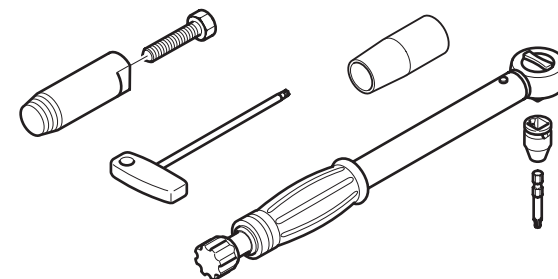
Replacing the crankshaft

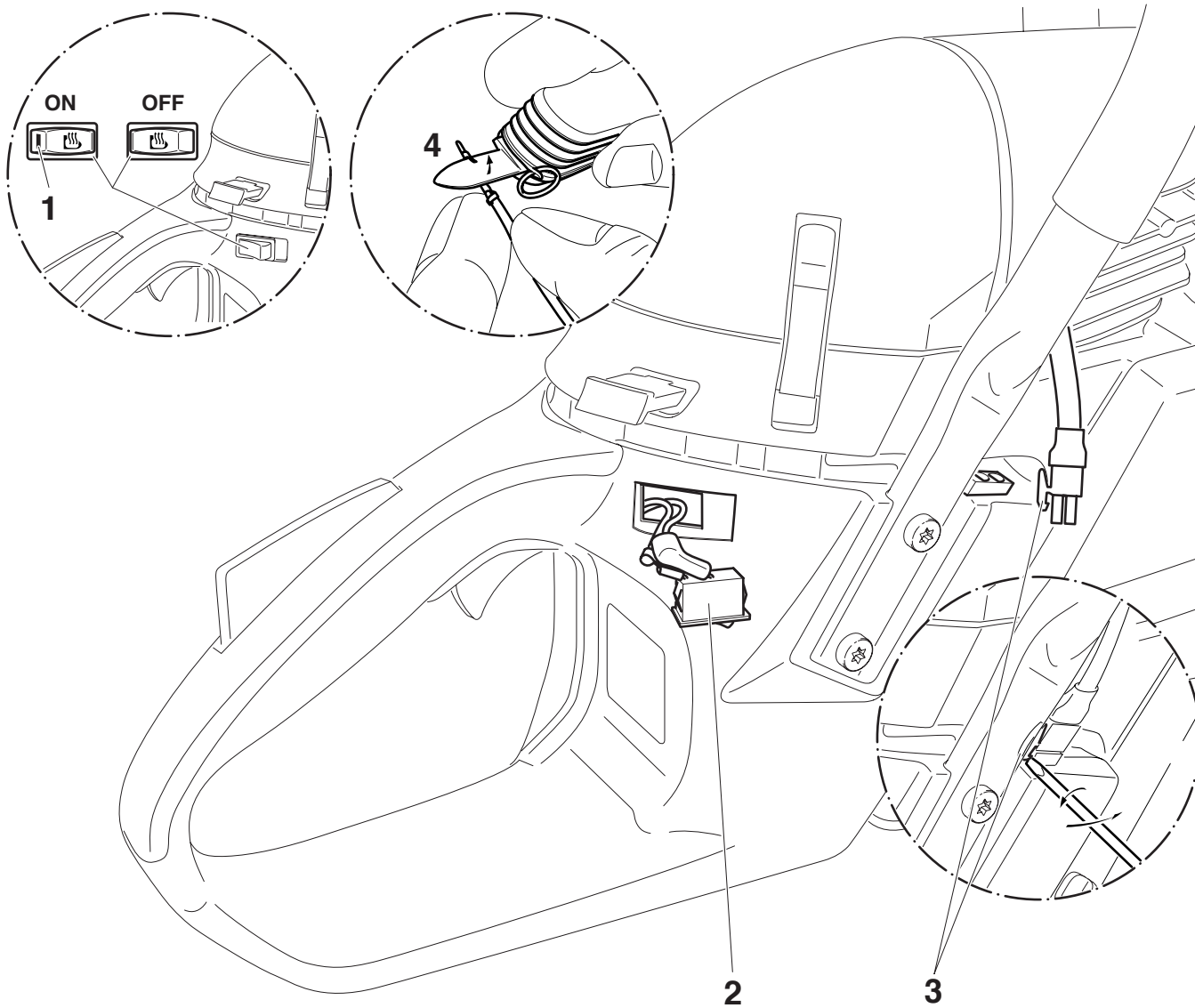
Heat the crankcase clutch-side and magneto-side to 150-160°C (302-320°F).

Evenly coat the external ring of the ball bearing **4** with "Loctite 601" and insert into the heated crankcase without pressure.

Lubricate the big end bearing **5** with two-stroke oil.

Tool





Diagnosis/Cause

The handle heater is switched ON when you can see the red marking **1** on the switch.

Diagnosis: Failure of heating in tubular handle **and** handle.

Cause: Generator defect, disruption in circuit.

Diagnosis: Failure of heating in handle **or** second handle.

Cause: Short circuit in effected handle.

Diagnosis: Both handles are being constantly heated despite heating switch being in OFF position.

Cause: Short circuit at or in switch, insulation cap is damaged or is missing.

Free-up cable for measuring

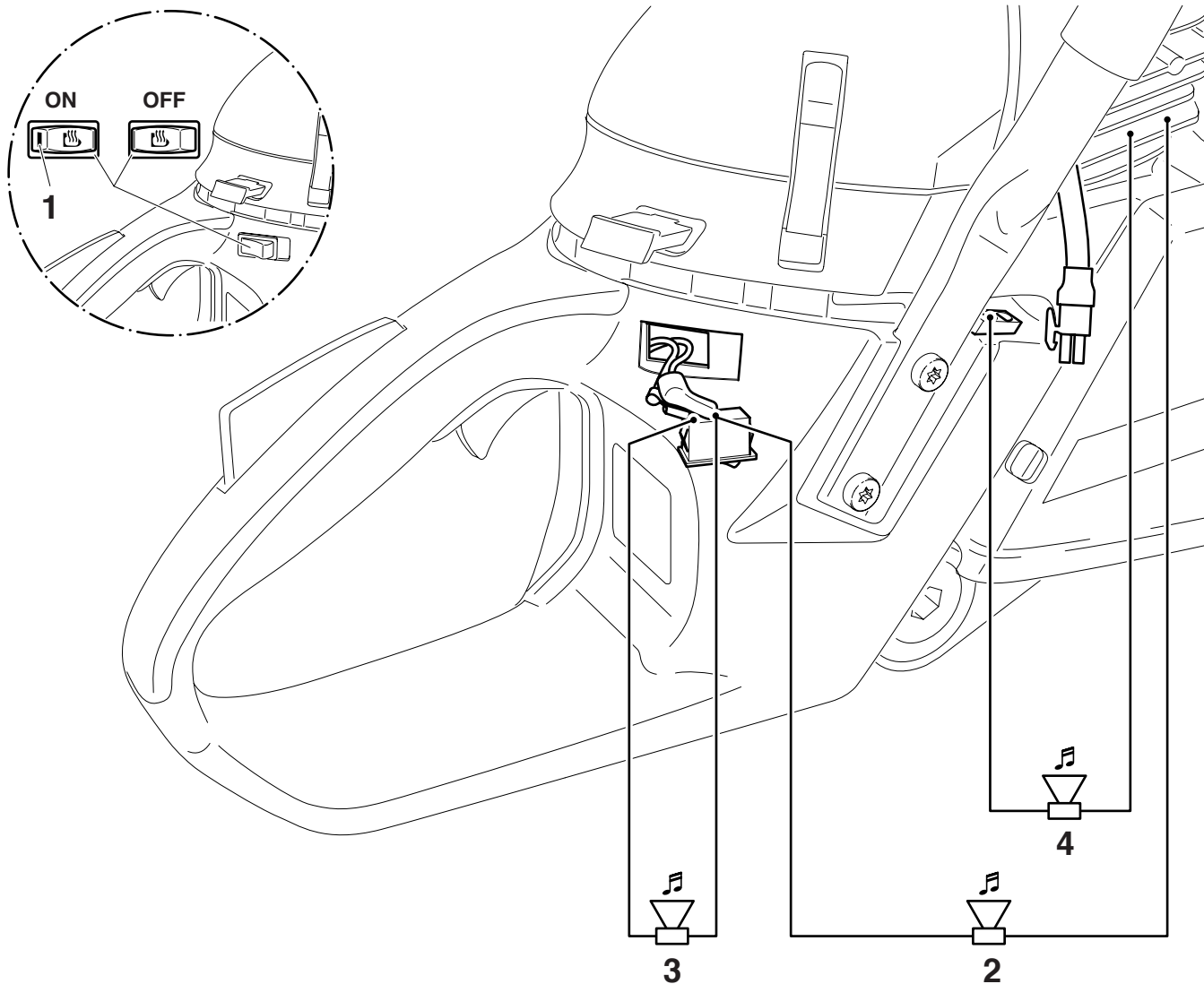
Remove switch for handle heating **2** carefully with a small screwdriver from tank.

Remove carefully locking hook **3** on plug of the second handle with a screwdriver and pull the plug upward.

Test contact pins in plug

These must be clean (free of corrosion), exposed and at the same height. The contact pins of the plug or the sleeve are to be secured with a hook against accidental loosening. If the hook slips out of its position the contact pin will move toward the bottom of the housing and can no longer make contact.

Before you replace the contact pins in the housing you need to open the hook **4** a bit using a small knife or similar tool.



Conductivity tests

Generator test (2)

Switch OFF the handle heating.

Test conductivity between the insulated pin in the middle of the switch and the cylinder (ground).

No conductivity - test cable and generator (038.148.020) for damages and replace if needed.

Switch handle heating (3)

Both handles are heated constantly or from time to time despite heating switch in OFF position:

Test insulation cap (038 146 030) at middle contact for damages and replace if needed.

Place switch in OFF position and remove the pin in the middle. Test conductivity between both connections.

Conductivity - replace switch (975.001.250). Bend the connection points of the new switch in the same way as can be seen on the old switch.

Place the switch 1 for the handle heater in the ON position and remove the pin in the middle of the switch.

Test conductivity between both connections on the switch.

No Conductivity - replace switch (975.001.250). Bend the connection points of the new switch in the same way as can be seen on the old switch.

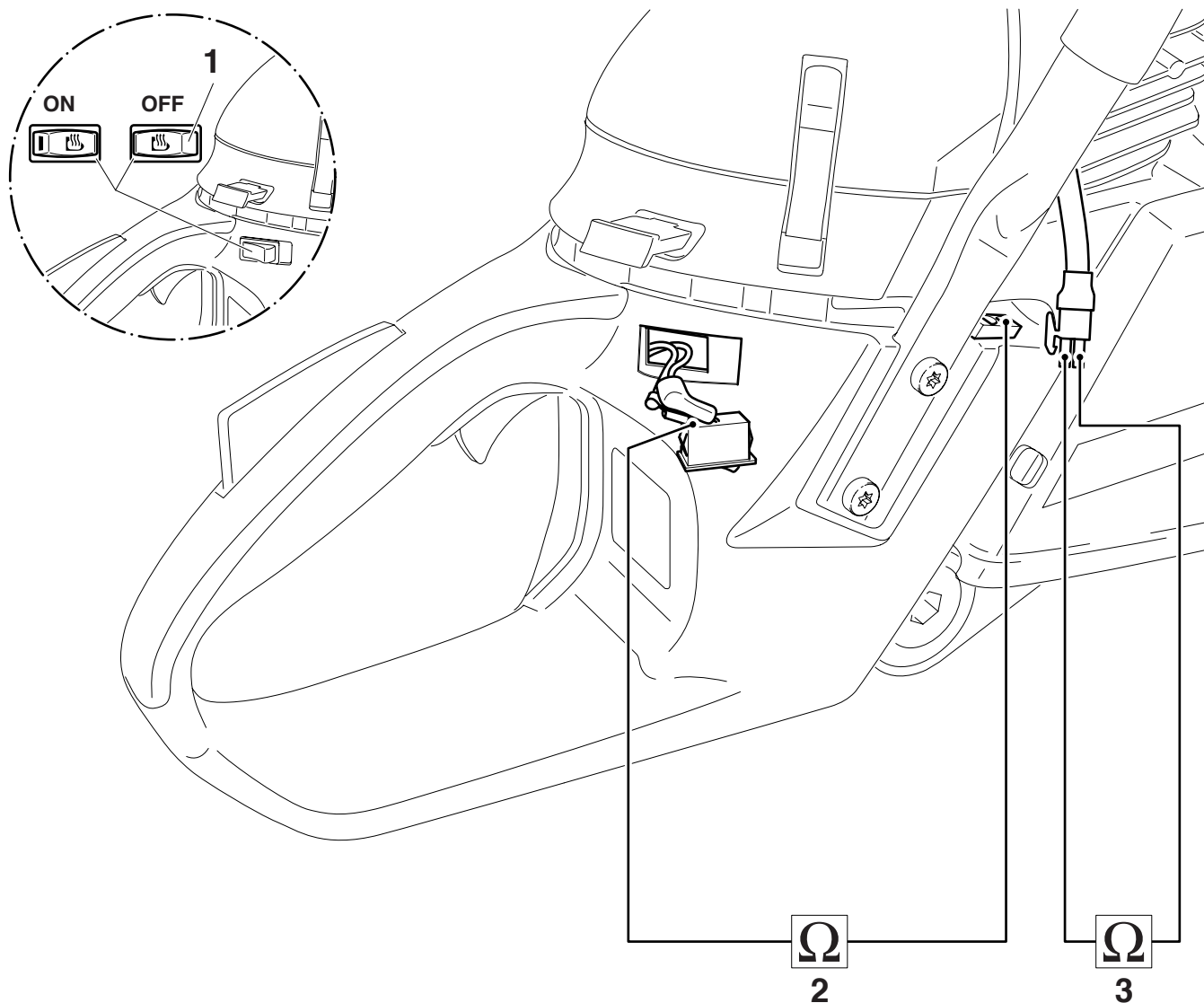
Ground line (4)

Test conductivity between the connection at the back (at the side of the second handle) of the sleeve and the cylinder (ground).

No conductivity - make connection to ground and replace ground line (970.311.570) if needed.

Tools

Conductivity tester or multi meter to test electrical resistance and conductivity.



Resistance measuring

Heating foil in handle (2)

Switch OFF the handle heating 1.

Measure the resistance between the pin at the outside of the heater switch and the connection at the front of the sleeve of the second handle.

Resistance 1-2 Ohm (at approx. 20°C)

Tank (038.114.070) must be replaced completely if resistance is incorrect.

Heating foil in tubular handle (3)

Measure the resistance between both pin contacts of the tubular handle.

Resistance approx. 5 Ohm (at approx. 20°C)

Tubular handle (038.310.030) must be replaced if resistance is incorrect.

Tools

Conductivity tester or multi meter to test electrical resistance and conductivity.

Ground wire	Slotted.BZ 3.5 x 9.5	1 x	1.5 +/- 0.2
Ignition fastening in crankcase	Torx M 4 x 20	2 x	5 – 0.5
Flywheel fastening with nut	M 8 x 1	1 x	27 +/- 2
Starter housing on crankcase	Torx M 5 x 20	3 x	4 + 1
Protective hood / base on crankcase	Torx M 5 x 20	2 x	6 +/- 0.5
Hand guard bearing, magneto-side	Torx M 5 x 20	1 x	4 + 0.5
Hand guard bearing, clutch-side	Torx M 5 x 20	1 x	4 + 0.5
Spike bar, crankcase, top	Torx M 5 x 12	1 x	12 +/- 0.5
Spike bar / Chain catch, crankcase, bottom	Torx M 5 x 16	1 x	12 +/- 0.5
Spike bar sprocket guard	Torx M 5 x 12	2 x	10+/- 0.5
Chain tensioning housing	Slotted.BZ 3.5 x 9.5	1 x	1.5 +/- 0.2
Grip shell / tank	Torx M 4 x 20	1 x	4 +/- 0.5
Tubular handle	Torx 5.5 x 20	4 x	5 +/- 0.5
Damping spring cap attachment	———	3	7.5 +/- 0.5
Damping spring / tank, clutch- and magneto-side, rear	Torx 5.5 x 20	2 x	5 +/- 0.5
Damping spring / tank, clutch-side, forward	Torx 6.7 x 30	1 x	6 +1
Tubular handle clamp / damper on cylinder	Torx M 6 x 14	1 x	6 +/- 0.5
Induction hose clamp	Cross-slot M 3	1 x	0.5 – 0.2
Spark clamp attachment	———	1 x	25 +/-5
Cable drum in fan housing	Torx 5.5 x 20	1x	4.5 +/-1
Generator armature in crankcase	Torx 4 x 20	3 x	4 + 1

DOLMAR



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